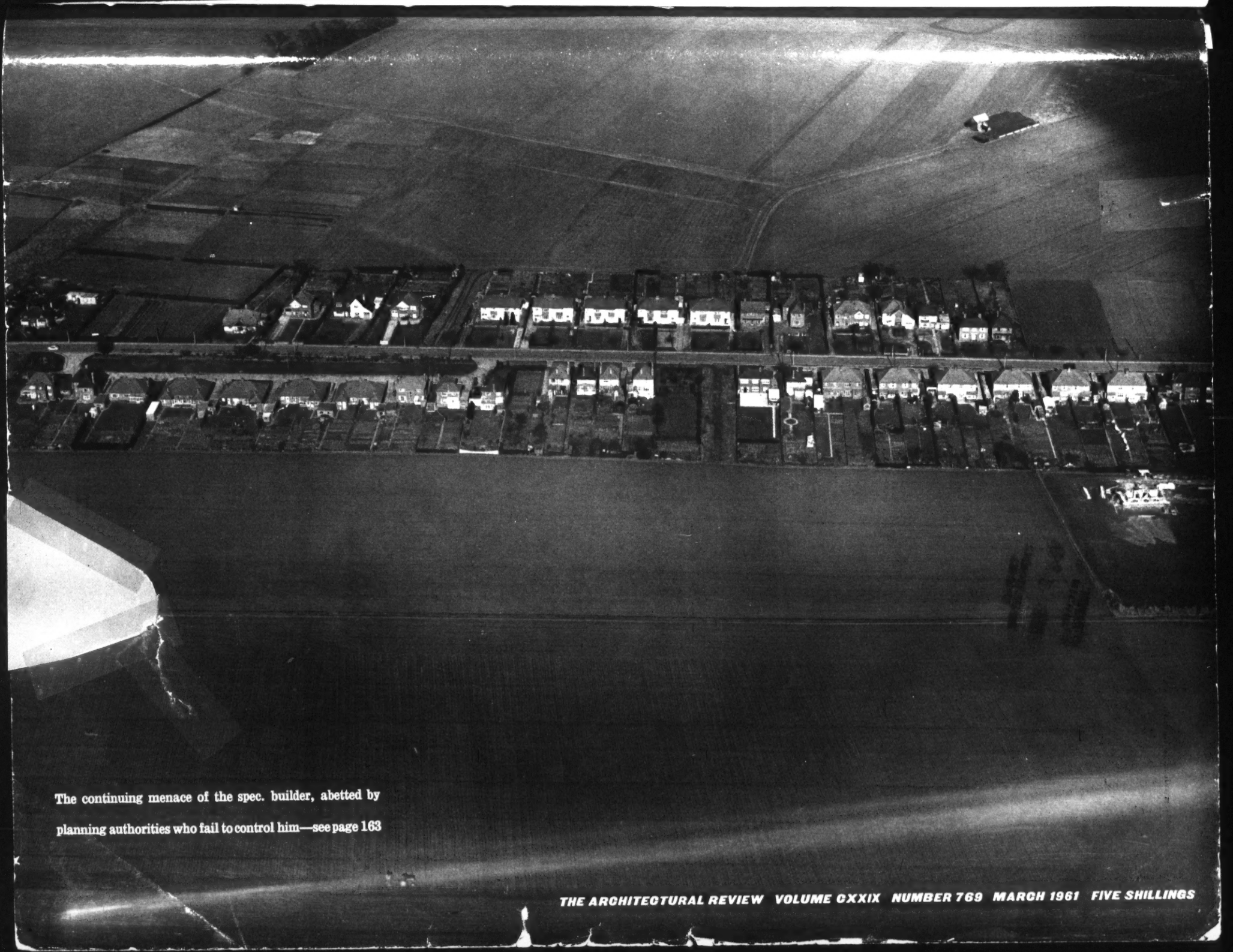

The continuing menace of the spec. builder, abetted by planning authorities who fail to control him—see page 163

THE ARCHITECTURAL REVIEW VOLUME CXXIX NUMBER 769 MARCH 1961 FIVE SHILLINGS

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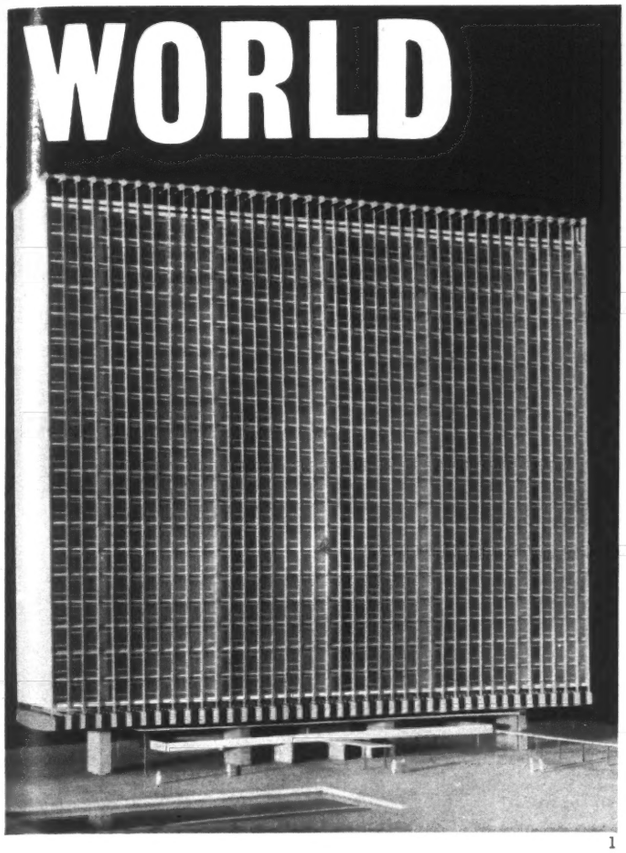
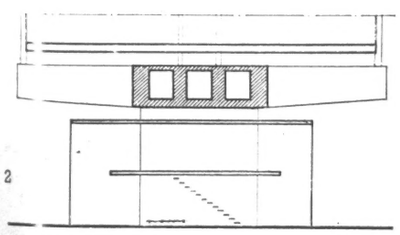
WORLD



1

NIEMEYER—
constructivist?

One often wonders how far a formal innovator like Oscar Niemeyer is a child of fashion, and how far he is a product of the hard economic facts of his time and place. The rolling curves of his reinforced concrete Neo-Barocco have not, of late, carried the absolute conviction of earlier years, because one knew that he was also designing neat square structures for some of his smaller buildings such as the library at Florianopolis (AR, World, July, 1959). Now, with the project for the Development Palace at Brasilia, we have a large building, 1, in a manner that suggests that we have a new Niemeyer on our hands. It is not only that the structure eschews the curves that have become his 'handwriting' and the whole building has a new, almost North American austerity, but that two other unprecedented qualities have come to light. The separate components of the structure are emphasized—the squat square pilotis, the enormous chassis beam that crosses them and the squared-off cantilevers that spring along both sides of it—see the section, 2. But their separateness is underlined by another innovation that is sensational in the Brazilian context—the entire structure above the cantilevers is in steel, previously out of the question in Brazil for economic reasons. Any number of questions at once spring to mind—most notably, why has Niemeyer altered his manner of handling concrete so drastically? Obviously, some modifications to his usual approach would be necessary to accommodate the steel stanchions above, but concrete is still a plastic material itself–why is it here treated almost constructivist-wise, as if fabricated out of separate elements? Whatever the answer to these questions, Brazilian National Steel will acquire a handsome new headquarters.



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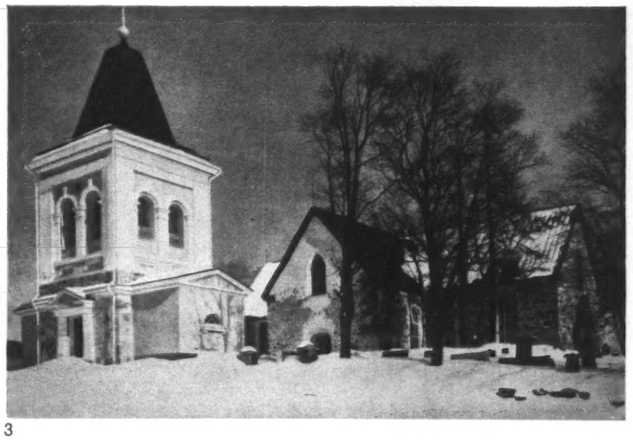

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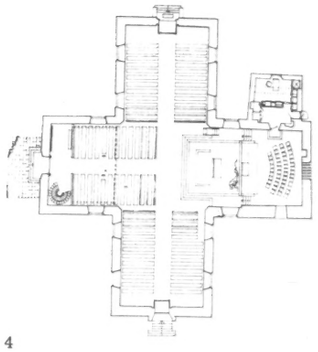
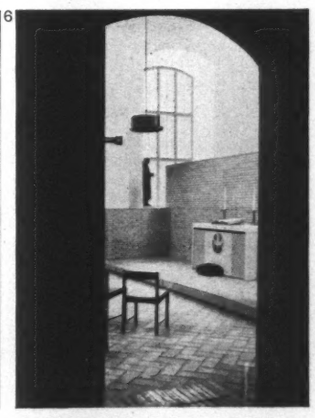
KIRKKO-NUMMI



4

The skill with which Finnish architects have tackled the problems of church design is so exclusively applied to brand-new work that particular interest attaches to a work of restoration such as that undertaken by Hansonn and Karlsson on the church at Kirkkonummi, 3, mediaeval as to its main body, but fronted by a remarkable neo-Classical bell-tower and porch. The main fabric was not substantially altered in the restorations, though the opportunity was taken for archaeological research in and around the structure, but the ruinous interior appointments, which had been of some interest before the war, were completely replaced. In the process the liturgical plan was modified, the altar being brought forward from the depth of the chancel, almost into the crossing, 4, where it is backed by a plain brick wall, 5. As the plan shows, the space behind this wall, 6, becomes (by English usage)

5



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ACKNOWLEDGMENTS

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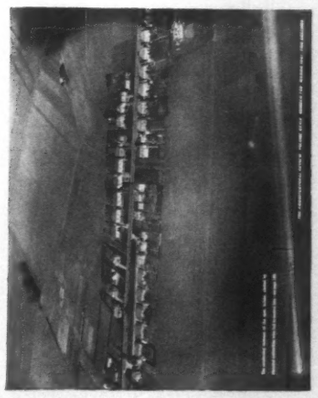

The cover *shows only too clearly, spec.-building growing—like mould round a wire in cheese—along a road through once-open country near Wallingford, Berkshire. Some of these houses are pre-war, but not many, for wherever heedless local authorities permit, this kind of landscape blight has now revived. But not all local authorities permit it today and—more remarkable still—not all speculative builders now automatically work at the lowest permitted standard of amenity. The rise of the responsible speculative builder, as well as the continuing depredations of the other sort, is discussed and illustrated on pages* 162–181.

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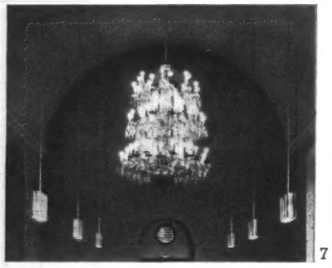
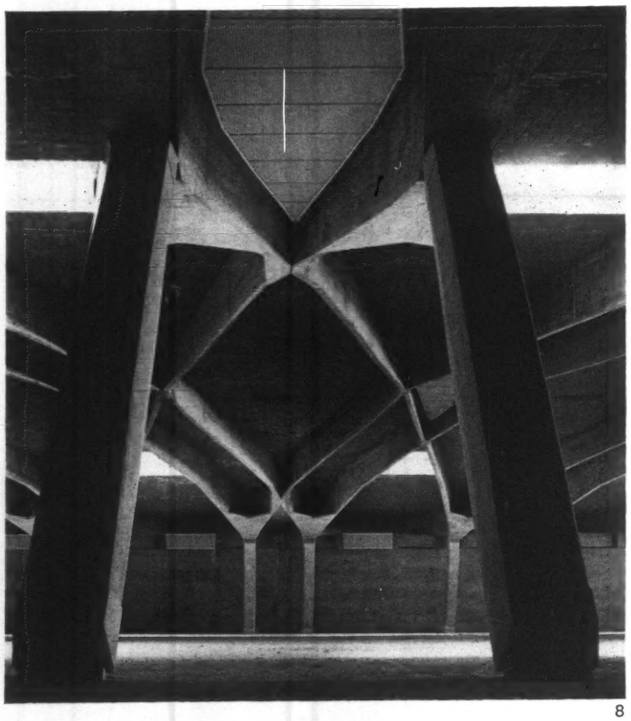
Kirkkonummi



7

a species of lady chapel, albeit in a fairly informal idiom. Furnishing is very simple throughout, except for some rich altar-frontals by Dora Jung, and a splendid Victorian chandelier, 7, that has been retained, hanging in space-consuming exuberance among the unassertive modern shades put in as part of the restoration.



8

DU: ROTH: NOGUCHI

However good, or bad, the reasons why Britain has no illustrated monthly as devoted to cultural subjects as is *Dü*, the *kulturelle Monatsschrift* published in Zurich, there can be no doubt that British architecture suffers from the absence of such a lay periodical capable of presenting architecture to the thinking public in its cultural context. Many laymen read the AR, of course, but this is not the same thing as finding architecture in a general magazine.

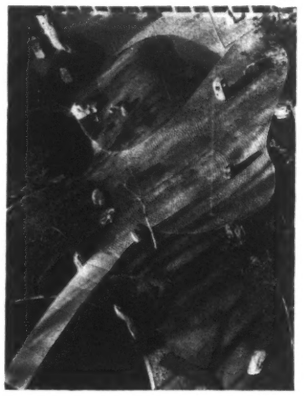
This point was forcibly brought home by last November's issue of *Dü* (237/1960) which published a kind of architectural super-travelogue: photographs, most of them full-pagers in colour, by Ueli Roth, and text by Silvia Kugler. Most architects would have come out of this fighting, chiefly because of the mode of classifying recent European architecture into *Konstructiv*, *Romantisch*, *Kristallin*, *Plastisch* and *Dekorativ*, in some cases according to criteria that would be hard to justify (and many British architects would probably demand to know how Leonardo Ricci's soft-centred pseudo-Brutalism got into the distinguished company of masters like Siren and Aalto under *Romantisch*, instead of under *Dekorativ*, alongside Caccia-Dominioni ?)

Nevertheless, Ueli Roth has cast a fresh eye over much that is well known, and much that is less so—among the latter, Riccardo Morandi's recently completed exhibition hall in Turin, 8 and 9, whose impressive

9

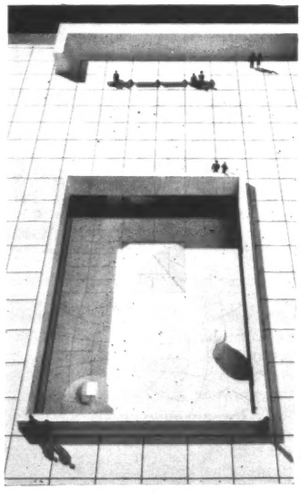
interior suggests that Nervi is not alone in this field in Italy. But one of Roth's most timely revisions was of Noguchi's so-called Zen garden by the Unesco Building in Paris. This was one of the first photographs of the garden to appear since it has matured, 10, and it preceded by only a few days the publication of the model of SOM's

10



Rare Book Library* at Yale, for which Noguchi has done a sunken sculpture court, 11. *Architectural Forum* (November 1960) supposed that these forms were 'suggestive of the world and primal forces,' but to the unbriefed eye they are much more suggestive of mathematical models—see, among the copious literature on this

11



subject, AR May 1958. Now, the point about resemblances to mathematical models was raised in connection with the Unesco garden—it is more obvious from ground level than in this view—and one wonders whether these compositions are consciously linked by that theme, whether it is unconscious in both cases, or whether the discussion of the first has made it conscious in the second.

** The main structure of the Rare Book Library will be illustrated and discussed in a round-up of recent US 'plastic' architecture which will form part of an expanded July edition of* World, *coinciding with the IUA Congress.*

WORLD LOOKS AT NOTTS

opinions on the Triennale school

Responses to the Notts/Clasp school shown by Britain at the 1960 Triennale have been more mixed, and mixed in more different ways than might have been expected. Lip-service, *en passant*, was more common than otherwise, particularly among periodicals from nations that had failed to respond to the theme of the Triennale. Italian responses were, of course, direct—for the double reason that Britain made the most massive response to the theme of the exhibition, and because every aspect of the exhibit was a direct criticism of current Italian practice in school design, a practice that seems likely to be multiplied many times, without radical reform, by the new educational programme. *Casabella* 245 'numero speciale dedicato alla scuola' published some daunting examples of recent Italian school buildings, but also paid the British exhibit the unspoken compliment of treating it, almost throughout the issue, as a touchstone for current standards, and as the culmination of an international historical survey of milestones in school design since Dudok's 1921 *Dr Bavinck* school in Hilversum.

But where *Casabella* is particularly to be congratulated is in seeing that the British School was not an isolated object, but part of a continuing programme of radical research '. . . **Today in England we find ourselves presented with an organisation that confronts, globally and radically, this problem, under every aspect, starting with a fundamental re-examination of the methods of study, work and realisation imposed by a national plan.**'

Gio Ponti, in an editorial extraordinary, in *Domus* (372/1960) while he referred back to previous publications of British Schools in its pages, preferred to concentrate on the school as an example, a witness, of British application to problems of design in this field. He delivered his opinion under three heads. 1. 'That this is not only a model school, but that this exceptional model of a school is a "standard" school of which three thousand examples exist in England.' 2. **That this shows with what determination Britain 'a nation which has no illiterates (and no lack of schools, as with us) has confronted the question of the school, whether as a teaching method, or as architecture.'** 3. 'That this school must make us wonder why it is not only an exemplary elementary school, but represents also a nation that has dedicated to its children . . . with a nation-wide maternal care, the surroundings that a small house can no longer afford.'

The ensuing polemic against the Italians, as a nation, for squandering on an expensive Olympiad the money that they begrudge for education can, as he admits, be anticipated by the reader, but it is clear that his admiration for the school itself is real: he calls it 'The jewel of the Triennale.'

Bruno Zevi, viewing the exhibition from the 'dolcevitan' sophisticatio of

Notts school

Rome, makes the British School the hinge between his own 'anti-catalogue of the Triennale,' and the claims of the official catalogue. This, he says in *L'Architettura* (61/1960) is where the official valuation and the anti-catalogue valuation coincide—though it is clear that he is prepared to concede something of the same status to the Belgian and Mexican exhibits. Nevertheless it is interesting to see where he believes the virtue of the *scuola inglese* to lie. **'The school is a masterpiece—but not of architecture, on which many aspects give rise to reservations within the general compositional scheme** (it is) **a masterpiece of humanity and intelligent presentation.'**

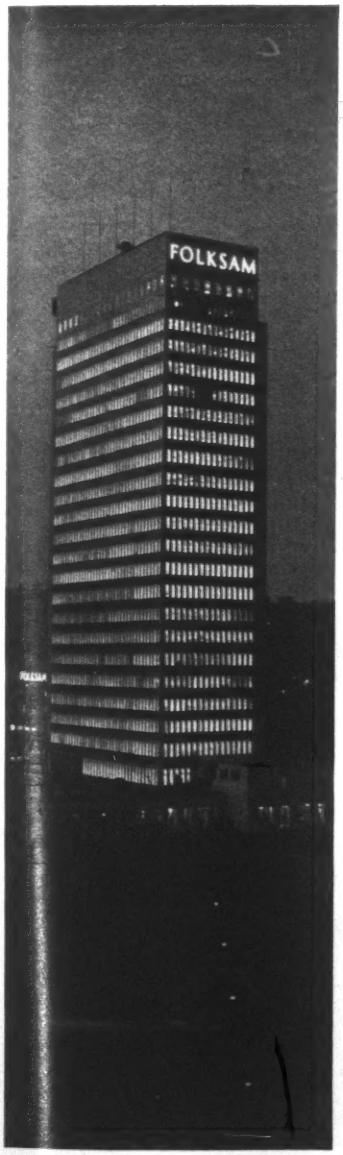
Levi speaks with frequent admiration of the display techniques used in the British exhibit. 'It looks as if the children have left the place a few minutes ago, perhaps to go into the garden, and will be back soon. The teaching equipment is shown in easy disorder, and an air of gaiety pervades everything. The problem of communication with the public has been solved in the usual empirical English manner, that should have been a lesson to everyone. This is how the whole exhibition . . . should have been conceived and set up; it would have been cheaper and a great success. But Italians are professors. . . .'

Amid this avalanche of informed and influential praise, it was something of a relief to savour the sharp taste of hostility—not from an Italian, to whom the school is too useful a weapon with which to belabour the government, but from a German, to whom it might appear in a more sinister light, as will be seen. Walter Münz, writing in *Deutsche Bauzeitung* (12/1960) objects that, whatever its technical excellences, this is not really a school but a kindergarten (a point which one may concede to a German) and that though it may be one of the high points of English building and of school-building in particular, it disappoints **'because of its functional mistakes. The plan with the classrooms grouped around the common hall, through which one must pass to reach them, and the toilets distributed in the space of each classroom, indicate a barely rational solution.** The exterior composition is good, but does not look like a school.'

This astonishing performance, which suggests a profound ignorance of English educational methods, and the labour expended in arriving at a plan-form rationally related to those methods, begins to explain itself in the next paragraph. 'It is therefore not at all clear why this plan and constructional method have been bought by the Federal Ministry, and that these schools will be built here in Germany.' Then, after a complaint that the school breaks all the existing German standards and byelaws for lightweight construction, comes the give-away **'Woe then to practising architects in Germany . . .'** He does not, however, go on to prescribe a protective tariff against architectural imports, but one sees only too clearly that the bulk importation of packaged design/structures of this sort would constitute a far worse threat to German architects than the occasional appearance of Arne Jacobsen buildings does to British architects—the first successful attempt on the part of an English manufacturer to bridge the widening economic gulf between the Six and Seven has met opposition from a quarter that proponents of European integration could hardly have anticipated.

FOLKSAM TOWER: *Stockholm*

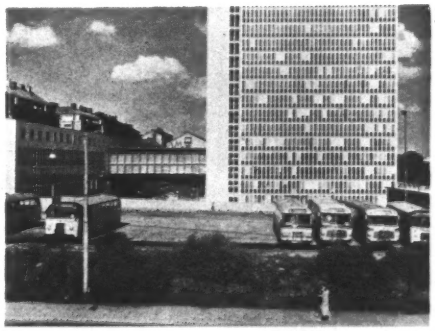
12



It is clear that Stockholm thinks a lot of the new Folksam building, 12, both in the literal and the metaphorical sense. The citizens are proud to have one of Europe's most 'dignified' skyscrapers, while architects are turning over in their minds just what the building means and stands for. The documentation on Folksam provided by the magazines is massive—*Arkitektur* devoted a whole issue to it (10/1960), and from this one can detect a degree of coyness about some of the apparently more straightforward virtues of the building, and an absence of the slightest embarrassment about some of its more questionable features. For instance, traffic circulation problems made it necessary to divide the structure into two parts, as the plan shows, 14; a low forebuilding on the Bohusgatan, and the main tower lying back in the centre of the block, the two parts being connected by the corridor-bridge seen in 13. In spite of the fact that this answers also to a reasonable breakdown by function, with the offices most used by the public concentrated in the low block, *Arkitektur* considers that this solution is 'perhaps slightly artificial from the architectonic point of view.'

Again, *Arkitektur* also publishes for comparison a round-up of other recent European skyscrapers and office-buildings — Phönix, Mannesmann, Galfa, Nestlé, Telefunken, but not, one notices, Pirelli or Castrol—and in this company one notices the curiously dated quality of much of Folksam's

13



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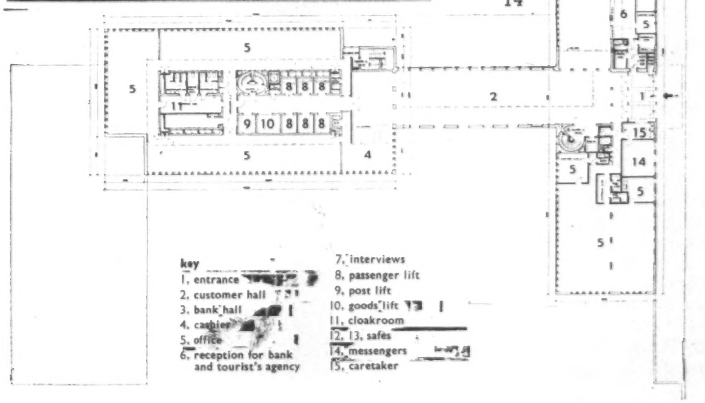

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detailing; the 'refained' lettering of the sign, which looks so out of place over the bustling foreground, 15, and

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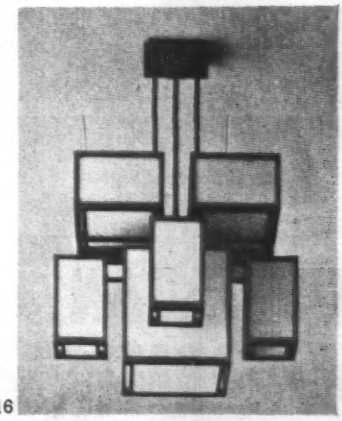
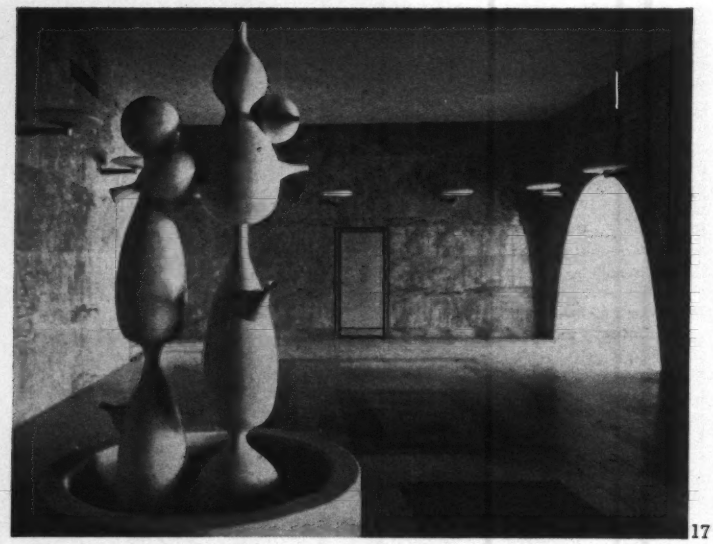
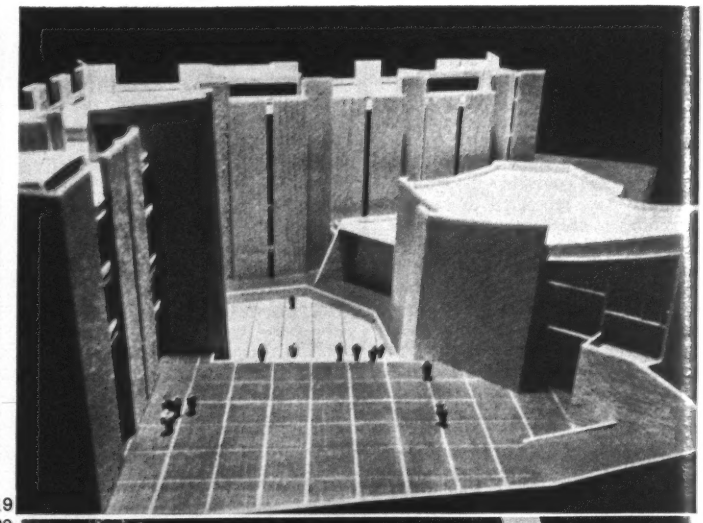




17

Folksam

the almost Neolibertarian light-fittings, 16, while the contrast is marked between Stig Lindberg's gay fountain (one of a number of works of art commissioned for the building) and the rather ponderous foyer, 17, in which it stands. Perhaps a clue to this apparent confusion of aims may be found in the fact that Folksam have had this project in mind since the 'Thirties, and perhaps the architect, Nils Einar Eriksson, has been brooding on it too long. In any case, these notes and queries are marginal to the quality of the building as a whole, which is clearly excellent.



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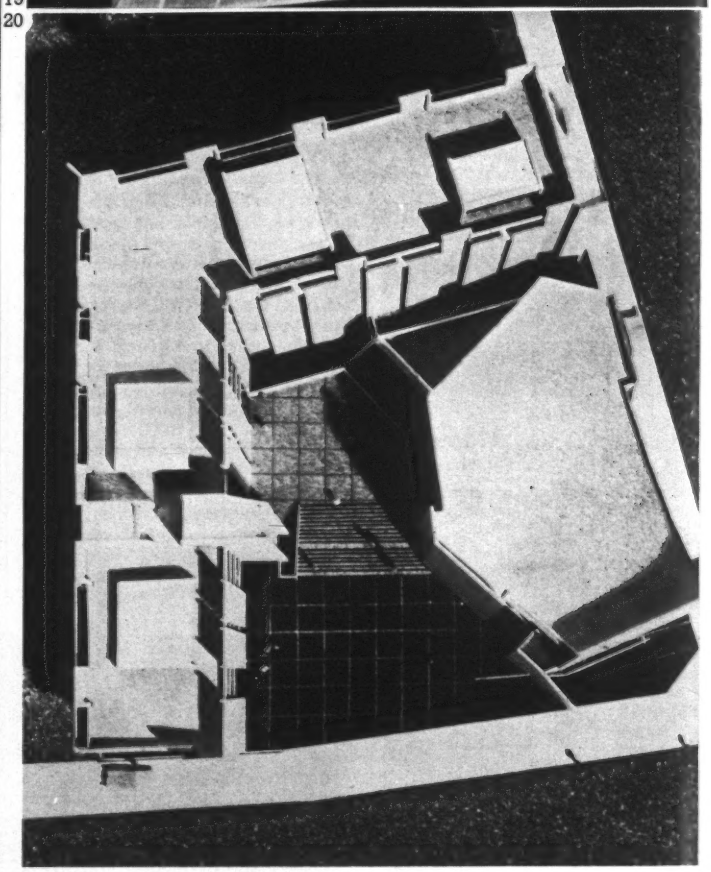

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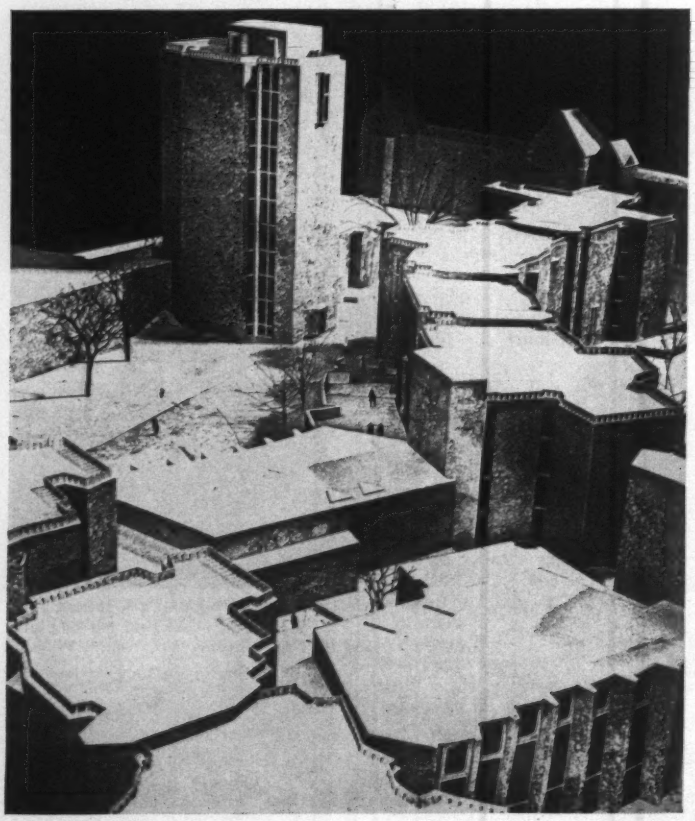


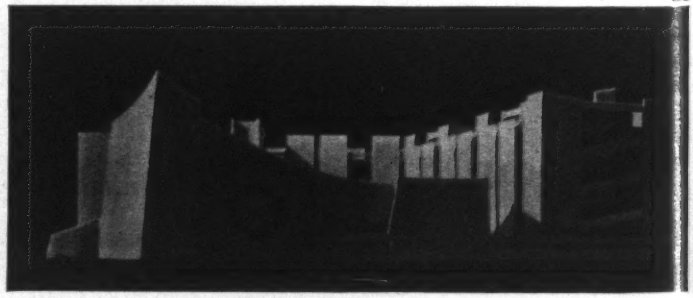
18

Collegiate planning

US-JAPAN A-FORMAL

Anything we can do, the Japanese can apparently do better. Craggy, collegiate a-formalism, which came in with Saarinen's Morse and Stiles Colleges project for Yale University, 18, has now made its appearance on the other side of the world in a project, 19, for what *Japan Architect* (December 1960) calls simply T Music College, by Ikuta, Ota and Hara. However, it should be noted that the a-formal quality of T is not the product of basic irregularities in the planning. Unlike Morse and Stiles which promises 'a wealth of odd shaped rooms with no repeats' T has considerable regularity in the planning of the bulk of the accommodation round two sides of the central court, 20, the visual informality coming partly from a dramatically stepped change of level between the outer and inner courts, and from the irregular outline and silhouette of the large auditorium, in the foreground in 21.

21



views and reviews

MARGINALIA

THE BOW FRONT

Just as we have become used to having the Green Belt as the one unbreachable item of Tory town-planning faith the Bow Group's *Let our Cities Live* pamphlet advocates poking holes in it with urban fingers—as if there were not enough already. Green fingers are now needed to poke back with and, to be fair, the pamphlet suggests this too, although it does not greatly assist the main thesis: that city growth cannot be stopped so planning powers should 'guide natural forces of expansion rather than halt them'—a familiar attitude by now. Already the Government seems to have been frightened by too much GLP success into taking measures that will only increase Bow-deprecated sprawl beyond the green belts. As Hugh Gaitskell said last year—'green belts should be the start of the countryside, not a ditch between subtopias.'

Too much breathing space in the past allowed cities to inhale people and exhale semi-dets into neighbouring counties. The plea for compact and comprehensive overall design is therefore logical and leads naturally to a demand for conurbations to be considered as the focus of patterns created by regional planning policies, even if a 'natural Conservative doubt about such an innovation' must be overcome. But the more compact urban development demanded is far more likely to occur if less land is made available for building. And, since most counties 'fall within the magnetic field of the great cities,' the inauguration of new conurbations is questionable, particularly if they too are to be allowed breathing space to gesture over hitherto uncorrupted fields.

The Bow Group none the less deserves applause for thinking about these matters at all. The document is persuasively written and although at first glance it may shame the orthodox planner into regretting that apparently he did the wrong things with the best of intentions, most of the theories in this exhortation are not new; e.g. employment dispersal, urban renewal, comprehensive design, regional planning, and clear distinctions between open country and close-knit town.

The danger lies in a too ready acceptance by politicians, both local and national, of some of the more popular ideas such as greater delegation or elastic green belts whilst forgetting to insist on the main requirement which is for new designs for reforming the conurbations to meet the demands of modern life.

Raymond Spurrier

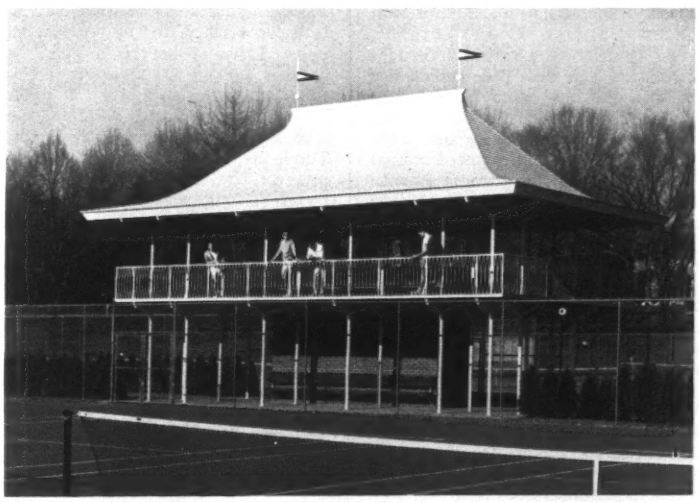
ARCHITECTURAL FILMS

Desperate programme secretaries of architectural societies may well be heartened by the fact that no fewer than 243 films are listed in the newly published architectural catalogue of the Federation Internationale du Film sur l'Art (published by Fréal, Paris, and Unesco). This is not just a bulk accounting of all available films, but a select list assembled by a committee that included such names as Alberto Sartoris, Lucien Hervé, J. M. Richards, Basil Wright and Gerrit Rietveld, among others, and can be taken to be the best internationally available up to the time of the last meetings of the committee in 1959. The range covered is enormous, in style, theme and geographical location, and would occasionally make it possible to compare diverse attitudes to the same building—e.g. Charles Eames and Friedrich Wollangk on the church of Vierzehnheiligen, innumerable films on Ancient Greek sites, or two different French views and one English one of Le Corbusier at work.

The catalogue is lavish and detailed in its information, with a three-way index that makes it possible to isolate films of particular types or suitable for particular audiences, though not everyone will agree with the value judgements passed on individual items: for instance René Clair's film of the Eiffel Tower is dismissed as 'pas le classique que l'on croit.' However, the description of the content of all films is sympathetically and fully presented, and gives an excellent idea of what the production has to offer.

YORK PROGRAMME

The York Institute of Advanced Architectural Studies, of which Mr. W. A. Allen (of the Building Research Station) will be acting director until the status of the Institute in relation to the proposed York University is settled, has just published its 1961 programme. Among the regular courses, such as those on the care of churches and other ancient buildings, and on project management, there are some innovations which, while perhaps equally specialized, may be of wider interest. Most notably, there is a course on Waterside Buildings and Waterscape 'with particular relevance,' says the programme, 'for Local Authorities.' It is a sign of the times that there are two new courses on the teaching of structures, one on hospital services, one each on urban renewal and traffic in towns. Also, the summer school for architectural students has been rearranged in the light of the experience of the past two seasons, and now features two sweepingly-broad survey-seminars, one on active developments in town planning and the other on national trends and personalities in current architecture. Details of all these courses may be had from the Secretary, the Institute of Advanced Architectural Studies, Micklegate, York.



1, the new pavilion for the tennis courts at Princeton University, USA, will probably evoke a shock of pleasurable recognition among English devotees of the architecture of relaxation. Designed by Ballard, Todd and Snibbe, the New York architects, its character not only evokes in general the form of innumerable sea-side shelters and pier pavilions of the nineteenth century, but it much more specifically evokes the two-storey, bracketed treatment of Tom Jeckell's cast-iron pavilion (AR, June, 1959) that stood until recently in Chapelfield, Norwich. It will be remembered that this remarkable work of rogue Victoriana was designed for, and exhibited at, the Philadelphia exhibition of 1876—can it be that some sub-conscious memory of it has lived on in America ever since?

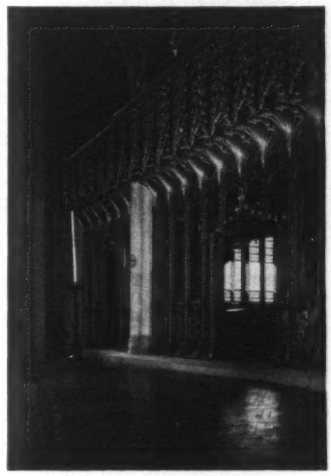
OBITUARY

SIR NINIAN COMPER: 1864-1960

Sir Ninian Comper died on December 22 last year aged ninety-six. His father was the Episcopalian rector of St. Margaret, Aberdeen, a Tractarian and close friend of Bishop Forbes of Brechin. He was educated at Glenalmond and the Ruskin School at Oxford. After a year learning stained-glass making with C. E. Kempe, he was articled to Bodley and Garner. In 1890 he married Grace Bucknall and had four sons and two daughters. One son designed the famous Comper 'Swift' aeroplane and the eldest, John Sebastian, carries on his father's architectural work while his wife's great-nephew, John Bucknall, continues the stained glass work.

Comper's studio—he always refused to call it an office—was on Knights Hill, West Norwood, until the LCC acquired the land for flats in the 1940's and he continued to work at his home, 'The Priory' on Beulah Hill, a Decimus Burton 'Gothic' house in a big garden. Comper died in the Hostel of God at Clapham, which is run by the Sisterhood from East Grinstead, the Community of Nuns founded by his godfather John Mason Neale.

His first work was the Chapel for these nuns established by his father at St. Margaret, Aberdeen (1889), and among his last works were glass and redecoration at St. Mark's, Regent's Park (1958), the War Memorial window in Westminster Hall (1952) and the reredos for the Holy House at Walsingham (1959). His conviction of the unity of the Catholic Church informed his life and architecture and



2, the screen at St. Cyprian, Clarence Gate.

he was particularly pleased at being asked to decorate the Lady Chapel and St. Sebastian's Chapel in Downside Abbey church.

He did hardly any secular work, the building of new churches and redecoration and furnishing of old ones occupying all his time. He thought much about church planning, concentrating always on the altar, and making his buildings a lantern for it, designing, as he used to say, 'from the altar outwards.' He wrote four learned treatises on churches and their architecture which have long deserved reprinting. In 1893 he introduced the first 'English altar' with corner riddel posts at Cantley near Doncaster. This has been copied all over the world, sometimes regrettably. He reintroduced the central altar to England with his refurnishing of St. John's, Waterloo Road (since destroyed) and in his new church of St. Philip, Cosham (1937).

His early work as exemplified in the crypt of St. Mary Magdalene, Paddington (1895), and St. Cyprian, Clarence Gate (1903), was in a late Gothic style highly original when examined closely, but Bodleyesque at first glance. As his annual tours extended from France to Italy, Spain, North Africa and Greece, he evolved a classical style which may be seen at Wimborne, St. Giles (1910), St. Helena's Chapel, Ealing (1913), and the Welsh National War Memorial, Cardiff (1928). He eventually produced a style which he called 'unity by inclusion,' made up of his own Gothic and his own Classic. This is seen at its most magnificent in his largest church, where his wife is buried, St. Mary, Wellingborough. He had an instinctive sense of proportion, subtly relating his detail to the whole and taking great care over mouldings as did his master Bodley. Above all, he was an exquisite colourist, and his use of rose red for hangings and carpets combined with the gold of his screens and blue of his windows make his work distinguished from all his many imitators.

He had three articled pupils, the late Randoll Blacking, Christopher Webb and Hubert Adderley (now

Lord Norton), with his son and the late Martin Travers as assistants, and firmly believed in the apprenticeship system. He considered that architecture was an art and not a profession and refused to accept registration or membership of the RIBA. At a dinner given to him on his ninetieth birthday he said 'I think I have done good by remaining outside the Institute.' As an architect his country knighted him and it further appreciated the greatness of this self-effacing man by burying his ashes in Westminster Abbey.

John Betjeman

CORRESPONDENCE

WHAT BECAME OF CIAM?

To the Editors.

SIRS,—Several misinterpretations and attacks on the leadership of CIAM appeared in various publications and cause us to give a short account of the past activities of CIAM.

CIAM was an avant-garde movement. These movements have normally only a few years of existence before they become history.

When CIAM was founded at the Chateau La Sarraz, Switzerland, the international situation for the representatives of the new movement in architecture and planning was one of complete isolation. We came together because the pressing contemporary problems of architecture and planning had received little attention by universities, institutes of technology and administrative bodies. We felt therefore called upon to make our own independent contributions to the analysis and creative solution of these urgent problems. The '*Manifesto of La Sarraz*,' 1928, set forth for the first time the new principles as worked out by this small group from various European countries.

To achieve our aim on an international basis, we established a working method which enabled us to evaluate the situation in different countries on a comparative basis and to proceed from analysis to actual resolution. Our intentions were realized on the basis of voluntary work by the individual members of CIAM. Never in its whole history, CIAM accepted any official support.

The results of CIAM and the congresses have been published in a series of books as: *Housing for the Lower Income Classes* (2nd congress, 1929)—*Lotissement Rationel* (3rd congress, 1930)—*Can our cities survive?* (4th congress, 1933)—*Logis et Loisirs* (5th congress, 1937)—*CIAM, a Decade of Contemporary Architecture* (6th congress, 1947)—*The core of the city* (8th congress, 1949).

These publications established the great influence of CIAM in every country concerned with the development of contemporary architecture and planning.

The time between 1928-1956 saw the gradual break-through and general acceptance of contemporary architecture in most countries of the globe. Research, as it had been introduced first by CIAM, became adopted officially everywhere. Universities began to look for teachers who were informed by CIAM principles.

In 1953, the founders of CIAM felt that the time had come to hand over the organization to a younger generation. One of the reasons was that their ever increasing activities and responsibilities did not allow them to carry on their CIAM obligations with their customary intensity. They therefore clearly expressed their wish to retire at the congress at *Aix en Provence*, 1953. To facilitate the change-over, the board decided to give the organization of the 10th congress into the hands of younger members of CIAM. J. H. Bakema, Holland, was chosen as coordinator. He built up a new group, called *TEAM-X*, which prepared the 10th congress (Dubrovnik 1956) with the assistance of the previous board members and the secretary.

At this point, two possibilities presented themselves: either to reorganize CIAM and to open 'a new page of CIAM,' as Le Corbusier proposed it, under the name of '*CIAM II*,' or to *eliminate the name of CIAM completely*, as was proposed by the secretary, S. Giedion. None of these proposals was accepted at Dubrovnik. The congress carried on with the name CIAM.

TEAM-X especially insisted to retain the old name and this attitude was strongly renewed by the adherents of *TEAM-X* at la Sarraz 1957. There the '*reorganization committee*,' consisting of TEAM-X and other CIAM members, including the secretary, had to take up again the question as to whether the name of CIAM should be continued. It was again TEAM-X, who insisted to carry on the activities under the name of CIAM.

It was in September, 1959, that the first international meeting was conducted under the responsibilities of '*The reorganization committee*'.

A statement issued at Otterloo to the press by a minority group of members of TEAM-X reversed the former position and declared: 'It was concluded that the name of CIAM will be used no more in relation to the future activities of the participants.' Complaints received from participants indicate that the press release can not be considered as a conclusive consensus of opinion, as it has never been discussed.

At Otterloo, the majority thought otherwise. The most prominent voice in this direction came from Kenzo Tange, Japan, who stressed the fact that architectural thinking may vary a great deal, but 'that we need mutual stimulation, help and encouragement.'

In a leading article in the *Japan Architect* (October 1960), Kenzo Tange stated) 'The day after I and many of my friends left the meeting TEAM-X announced CIAM'S dissolution. I was later informed in Boston that the name CIAM was no longer to be used' and asks distinctively that CIAM would do best 'to remain organized under the same name as before. I believe that such a movement will develop. I believe too that it will *not be centred around Europe, but around other areas*.' To us, it seems important that this positive impulse comes from Japan, a country which recently came to the forefront of contemporary architecture.

CIAM has fulfilled its initial task as far as Europe is concerned. To create a positive workable platform, which will continue to attract those who are entrusted with the task and responsibility of giving shape and substance to the vast areas coming only now into the orbit of the contemporary evolution, would be a true continuation of the mission of CIAM.

Yours, etc.,

J. L. SERT.
W. GROPIUS.
LE CORBUSIER.
S. GIEDION.

Zurich.

ARTISTIC AUTONOMY

To the Editors.

SIRS,—If Cleeve Barr (AR, December, 1960) can believe that there are 19,687 members of the RIBA and only 19,183 registered architects and therefore (one) 100 per cent membership it is not surprising that he also believes that the RIBA is consolidating its position.

In fact there were on October 31, 1960, 2,098 architects unattached to the RIBA, IAAS, FAS, AA or ABT, that is to say more than ten per cent of the profession. Since the number of pre-war registered architects must be decreasing due to retirement the only significant figures that Mr. Barr could give us would be the numbers eligible for membership who, like Mr. Barrington Kaye, fail to see what advantages the RIBA has to offer.

Yours, etc.,

JOHN BASING.

[Cleeve Barr replies: I am not really so naive as to believe that an approximate equality between the total number of RIBA members and the total number of registered architects means 100 per cent membership of the RIBA within the profession, but it does very broadly indicate a fundamental difference from the pre-war position. In the table published in my review of Mr. Barrington Kaye's book I was completing sets of figures for the years 1950 and 1960 using the same sources which the author had himself used for the year 1941—viz., the RIBA Kalendar and the ARCUK Register.

The detail figures are not unfortunately available to show the number of architects who are potential, but not actual, members of the RIBA. Mr. Basing quotes 2,098 registered architects 'unattached' to any professional body. I would hazard a guess at another 1,000–1,500 registered architects who are members of other bodies represented on ARCUK but who are not members of the RIBA. Total, say, 3,000–3,500. This is offset, however, by some 600–700 RIBA members (not, we hope, engaged as principals) who have never bothered to 'register.' If there were 3,000 architects, not members of the RIBA, this would represent, say, 15 per cent of the profession.

The number of representatives of organizations on the Registration Council presents further evidence that the RIBA has 'consolidated its position.' Between 1941 and 1960 the number of representatives of 'unattached' architects (at 1 per 500) fell from 8 to 5. The number representing the IAAS, FAS, AA and ABT (also at 1 per 500 members and involving many RIBA members having duplicate representation through these bodies) fell from 10 to 8. The number of direct RIBA representatives (again at 1 per 500 members) increased from 16 to 30.]

THE GREENWICH LAYOUT

To the Editors.

SIRS,—The remarks of Mr. Harris published in your August issue tend on the surface to nullify my evidence in support of a theory which suggests that Inigo Jones had in mind the planning of a palace on the site of the derelict one of Placentia. He appears to imply that I make a plea for Jones as the designer of pavilions. If his original designs for them be extant — how great would be the desire of all of us to see them! There is much evidence to support the fact that Jones had intentions of placing them at the corners of the double-block of the Queen's House. See 'Wren Society,' Vol. VI. In all—in this volume—are seven plates showing corner-pavilions. One such plan was placed before the Board, May 1712, and one by Hawksmoor illustrating his notable unofficial 'pamphlet.' Plate XXI—in Mr. Chettle's book—gives their dimensions —these allow the whole to be exactly enclosed in a 3 chain square. I infer that here the disciple Webb followed his Great Master.

In 'Tenet 1' Mr. Harris finds evidence to show that Webb proposed a grand rebuilding of Jones's conception. Would it not be more accurate if he wrote 'a grand enlargement'? Why did he drag in illustration 4? This is in the Worcester Collection—but there is no accepted evidence of its being authentic. From a stylistic point of view there is the absence of qualities which so typify Jones's work. This paragraph fails in convincing the reader—in that so much irrelevant matter can be woven around it in the absence of good illustrations. Tenet '2' just amuses me. There is not on record the nocturnal descent of a sugary baluster from the roof of the Banqueting House in Whitehall—disturbing the sleep of the resident architects in the Old Scotland Yard offices. Tenet '3.' There is documentary evidence to show that in 1728 the stair-way as we now know it had not been erected. From 1661 to at least 1728 is a long time—many changes may have occurred. The preparation of the site for the foundations of the Great Hall was carried out by Hawksmoor under the instructions of Wren. The dimensions had probably been staked out by Webb about 1669.

It is only by the acceptance of my theory can the true story be pieced together. I refuse to discuss the third dimensions—my case is entirely for two. How often Jones's words ring in our ears!

'In all inuençions one first must prepare the plan design.'

I am not surprised that Mr. Harris is confused as to my interpretation of my findings—in that his statement of my case is incorrect. The absolute disregard by him of the influence of the principles of Alberti and Palladio on the mind of Jones in an age of some superstition seems sacrilegious. He does not appear to know what a lack of empathy means—what false outlooks arise. Wittkower, Lesser and others have written great works in their worship of the Italian theorists. Not enough insight has attached to the presence and the counsel of Inigo Jones.

Yours, etc.,

OCTAVIUS WRIGHT

BOOK REVIEWS

CLOSE-UP OF ROME

A TIME IN ROME. *By Elizabeth Bowen. Longmans*, 1960. 21*s*.

Guidebooks apart, every new book with Rome for its subject must be mainly about its author—his tastes and interests and appetites, his inhibitions and incuriosities, his temporal and spatial co-ordinates. Most Rome-fanciers, like Stendhal and Henry James and Augustus Hare, think of themselves as extended in space, promenading, riding, walking.

Miss Bowen calls her book *A Time in Rome*—and rightly, for it is of the passing hours that her reader is conscious, as she herself was, from first to last. Time, she notes, is a kind of space: it creates distance. And it takes one's entire capacity to live one moment. She arrives in the middle of a detective-story, and her first act in Rome is to lie down on her bed to finish it. As the train carries her off to Paris on the last day, she sees through her tears the tenement-blocks of the Quartiere San Paolo streaming past, wavering into mists. At every moment between she makes us aware of the Roman evening clatter or dawn hush, of lunch-time or dinner-time or not quite dinner-time, of the frustrations of the siesta, the enveloping slumber of midnight which effaces time. Or quite suddenly, by skilful cutting, we find ourselves buried alive with the Vestal Virgins, or calling on the Empress Livia at Prima Porta, or firing cannons off the Castel Sant' Angelo with Benvenuto Cellini, or charging up the Janiculum with Garibaldi, or helping St. Luke and St. Paul to keep the Roman provincial authorities at arm's length, or simply lying awake with dyspepsia after the discomforts of the triclinium worrying about Caligula or Domitian and whether we've had it. . . . Where Stendhal, with a superior Parisian smirk, points to an album on the drawing-room table, and Augustus Hare, fussily solicitous, helps us with our sketching things, Miss Bowen borrows for the afternoon the cameramen of Vittorio de Sica and directs the close-ups and tracking shots and fade-outs.

The result is vivid but confusing, like the nightmare of history from which Joyce was always trying to wake up; and one wonders what sort of an impression of Rome Miss Bowen is conveying to somebody who has never been there. She gives us piercingly accurate glimpses of one tiny sequence after another: a shopkeeper crashing down his iron shutter and bending to lock it before he stumps off to lunch; great hatstands in restaurants 'branching like glossy commas'; street-sweepers in their flopping smocks 'working stiff bristles into interstices'; waiters in restaurants waiting; elderly persons walking their dogs on the Palatine towards sunset; a woman suddenly caught in a doorway, her face distorted with grief and rage. . . . Well, anyone who has seen *Bicycle Thieves* will find his images confirmed and amplified. And, luckily, Miss Bowen spares us the interminable horrors of *La Dolce Vita*: the Parioli are blessedly beyond her range. She also spares us the conversational snatches of local colour with which most travel-writers see fit to bedeck their narrative. She is one of those who know that you can learn as much about people by staring at them as you can by talking to them. Miss Bowen stares and stares, and her eyes seldom deceive her.

Many readers, delighting in these sidelong glances at the Romans of today, may wish that she had contented herself with the present, had let the past act simply as a gorgeous blur, slightly out of focus, and emphasizing thereby the needle-sharp definition of the foreground figures. But that was evidently not Miss Bowen's intention: like a mannerist painter, she gets some of her most telling effects by sudden changes of scale, abrupt freaks of perspective. After all, she is an accomplished and experienced manipulator of *mise en scène;* and this book, she says, is the one she is happiest to have written. Let us accept it as such, and not wish she had written another kind of book.

Scribblings on the margins of her guidebook, Miss Bowen calls them. But they are not quite that: sizable stretches of the authorities she consulted have got entangled in her discourse, almost inadvertently, as though caught in the whirring machinery of her mind and ripped from their context—pages of the Acts of the Apostles, pages of Dr. Trevelyan, a thick slice of Cellini, paragraphs of William Wetmore Story, snippets of Augustus Hare, and a good deal of diluted Samuel Dill and muffled matter from Momigliano and Carcopino (whom she will call Carpocino, as if he were a sort of portmanteau drink at the Tre Scalini). It is all relevant and all entertaining, but it makes the book a queer shape. Also it must be recorded that Carcopino does not suffer alone: many more are mangled, persons and places, and they irritate the attentive reader like a pebble in his shoe while treading the Roman Forum with a lofty step.

Roger Hinks

AMERICAN STRUCTURES

AMERICAN BUILDING ART: THE NINETEENTH CENTURY. *By Carl W. Condit. Oxford University Press, New York*. 87*s*. 6*d*.

Professor Condit, who is already well known for his book on the architecture of the early Chicago skyscrapers, has now published a comprehensive study of structural engineering in the United States during the nineteenth century: and he plans a companion volume bringing the story up to date. It may be said at once that the present volume is not only the first of its kind but will without question remain a classic.

It is a fact, now in danger of being forgotten, that structural engineering is an art as well as a science; although it may, of course, have very little relation to Art. It is in the former, non-romantic, sense that this word is used in the title and throughout the book. No one understands better than Condit that building techniques do not constitute the aesthetics of architecture, but they do form an essential part of architectural history in the nineteenth century, with a logical development to which Condit devotes an exceptionally interesting chapter. Yet most of the book is concerned with the great structures—bridges, dams, railway sheds, warehouses and grain silos—which were, in the narrow view, not architecture at all. And precisely because their designers were compelled to solve unprecedented engineering problems in the most economical manner, in a field where the formal architectural training of the day was more likely to be irrelevant than helpful, a vast amount of knowledge and skill was gained which completely transformed the world of engineering and, before the end of the century, that of architecture itself. Eads's steel arch bridge at St. Louis over the Mississippi in 1868 and Roebling's Brooklyn bridge two years later were different in every respect from what could have been conceived, let alone constructed, a hundred years before in the States or anywhere else.

Roebling is famous; but how many know of Eads, one of the great engineers of the last century, and Finley, Ellet, Whipple, Linville, Bouscaren, Sooy Smith and Morison—to mention only some of the bridge designers. The works of these men have an independent history and importance of their own, apart from the later application of their discoveries to the construction of the first tall steel-frame buildings in Chicago and New York, and this history has been admirably set out by Professor Condit. His treatment of the early works in concrete and reinforced concrete is also most valuable, not least because he shows by drawings and photographs what Ransome and Emperger actually built, instead of the vague descriptions copied drearily by one author from another.

In general the explanatory notes are excellent and one is grateful for the bibliographic references; although these could with advantage be even more numerous. It may be questioned whether there is any positive evidence to support the statement that the Chamber of Commerce 'was the first building in Chicago in which the iron and steel frame was used without any masonry adjuncts,' and it is disappointing to see the often repeated mistake that the first four storeys of the Reliance Building were completed in 1890. Apart from the foundations and the shop on the ground floor, this masterpiece of the Chicago school was designed and erected in 1894. I have noticed some other minor errors, but in a work of such wide scope and originality the wonder is that they are so few.

A. W. Skempton

THE CARE OF SPACES

DESIGN AND DETAIL OF THE SPACE BETWEEN BUILDINGS. *By Elisabeth Beazley. Architectural Press*. 42*s*.

This book fulfils a want that may not, to our profession's shame, have been as long-felt as it should have been but is now verging on the desperate. It is indeed only during the last fifteen years or so, due largely to the pioneering efforts of you-know-what, that architects have seriously concerned themselves with matters of floorscape and trim, of fencing and kerb-stones and bollards, of lamp posts, gateways and bicycle stands. Most of us by now realize how important these details are, how worth while it is to take trouble with them, and yet how lamentably scarce and bafflingly scattered is the information available to us upon materials, techniques and comparative costs.

Elisabeth Beazley, an architect of truly Crimean perseverance and with an eye as alert and affectionate as a birdwatcher's, backed by years of no doubt battle-scarred New Town experience, has bravely set out to gather within one volume all this miscellaneous but closely-related data. She deals with copings and gulleys, with expansion joints and exposed aggregates; she tells us about the 'going' of the Spanish Steps and the size of motor scooters, the maintenance of 'iron' (actually mild steel) railings and the probable lifetime of a wattle hurdle.

Did you know it was illegal to pinch (in quantity) cobbles off the beach, that there are still more than a dozen firms making iron bollards, that while a single strand of barbed wire in a fence is a useful anti-damage device against sheep, it can seriously injure hill-ponies? Could you properly specify a heavy stock fence, an area of granite setts or a gravel drive? Here are the answers—plus over two hundred photographs, drawings and diagrams.

Hugh Casson

SHORTER NOTICES

BRISTOLIANA

BRISTOL IN THE 1890's. *By Reece Winstone. Published by Reece Winstone*. 17*s*. 6*d*. (*cloth bound*), 10*s*. (*laminated covers*).

Mr. Winstone is a photographer with a great talent for picking out the interesting object and the interesting shot. He is also a collector of photographs, and his collection of Bristoliana has enabled him gradually to publish four paper-bound volumes on his home city. They deal with the city today (of course with his own photographs), in 1914–39, 1900–14, and now the 1890's. This latter volume is the most successful up to date. With 186 illustrations it is remarkably good value. You see in it a four-horse bus pacing up Park Street, an 'electriophone' for listening to concerts, electric trams of 1895, automobiles of the Bristol Motor Co. of 1898—they took five hours from Bristol to Coventry in 1899—a sad girl by a substantial telephone, 3, photographed in 1894, and much uninhibited lettering. There is also a good deal of topographical detail, and much out of the way information in the captions; for Mr. Winstone is a knowledgeable man, and one who can make good use of his knowledge.

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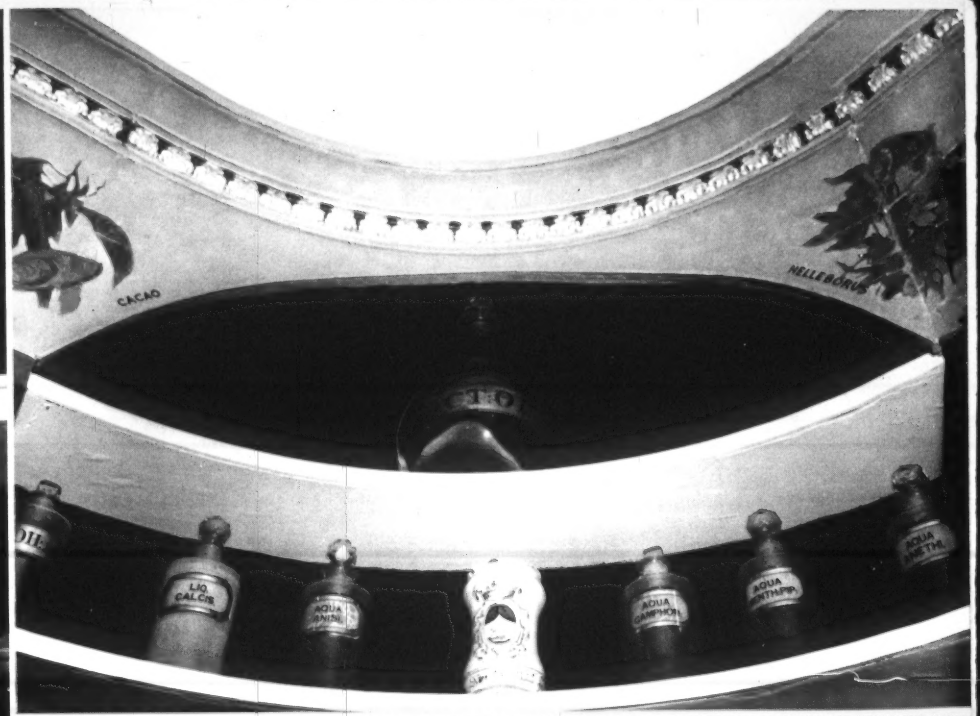
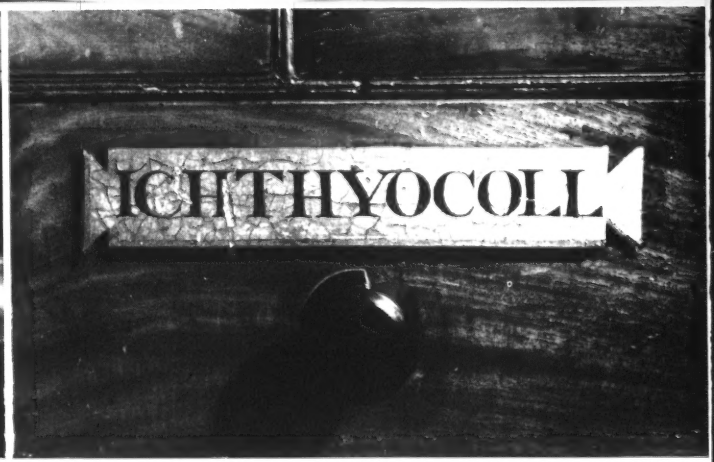




Examples of the traditional chemist's shop are disappearing even more quickly than of the traditional pub, though the best display the same richness and character as well as an eighteenth-century elegance in their furnishing. These pictures were taken in Savory and Moore's in Bond Street, London, who have just completed a poorly designed and unworthy extension but have beautifully restored the old front part of the shop under the supervision of Bryan and Norman Westwood and Partners—see also page 208, for the same architects' new exterior incorporating the original shopfront.

Peter Ferriday

VICTORIAN STUDIES

The history of Victorian architecture is being partly written for the first time and partly rewritten, and each addition to knowledge increases our sense of the complexity and contradictions of the age. The contradictions are easily illustrated. William Morris detested the Forth Bridge; Waterhouse admired it. Guesswork would have reversed their attitudes. The designer of the bridge bought very largely from the worst the Royal Academy could annually display. Such curiosities could be given in any number. The architects were major forces in the age and the poets were not. There may be ascertainable reasons for this and there certainly were personal reasons. A perhaps inexplicable fact was the piety of the architects: Butterfield, Street, Sedding, Norman Shaw were High Churchmen; Scott, Pearson, William White, Christian, Paley and many others were respectable churchmen; Pugin, Bentley, G. G. Scott were Roman; only Burges and Barry remain to be accounted for and it may be that they were assenting Anglicans too. Only Philip Webb was a known lapser among the distinguished architects, and he was full to overflowing of Ruskinian spirituality.

Yet Dickens, George Eliot, Arnold and James were agnostics; Rossetti, Whistler, Leighton, and Morris were agnostics. When the classic manner was resumed the architects became agnostics, so perhaps there was something to Pugin's fulminations after all. It could probably be demonstrated that most of the good architects were Tories (Walters an obvious exception and Waterhouse presumably so) and the writers Whigs or worse. English men of letters were liberals, and paradoxically the architects were radicals, Tory radicals. All of them, writers, architects and painters, were in opposition, and demonstrative opposition, to what they thought the current of the times. They deplored the consequences of industrialism, they deplored success, they deplored the *Daily Telegraph*. But of all the arts architecture was the most wayward, seemingly the most out of step with the age, and possibly the most splendid. The rigours of the Gothic Revival were representative of the age, but it might be more accurate to describe them as representative of the Victorian opposition to Victorianism. Mr. Bassett Keeling's churches were an act of aggression, not conformity.

One body, the Church of England, was the greatest single influence on Victorian architecture. Its vitality was astonishing. With a legacy of rotting rural churches, an organization quite outdated by rapid economic change, a great shortage of buildings in the enlarged towns, the churchmen fought back with tremendous determination and success. Anyone who has read the life of a Victorian cleric will have a

keener sense of the appropriateness of Butterfield's buildings and of the travesty of Trollope's novels. Pugin made a great architecture possible, but it was Butterfield's inventive genius that produced a new, brick, urban Gothic, a Victorian Gothic. The outside of All Saints, Margaret Street, inspired all the architects from Street to Bentley, from Pearson to Webb. Its manner was in perfect accord with the aggressive, uncompromising, re-capturing intentions of the Church. It could have happened that the Church failed to find so perfect a physical accompaniment (other radical bodies had failed to do so and were to fail) and it did happen that many churchmen failed to like it when they had got it, and preferred the gentler milk-and-water version of Pugin put out so industriously by Scott and others like him. The moment of choice for the young architect was All Saints, Margaret Street; he was either converted or became a middle-brow. The works of the converted are all over England; they are rarely lovely, hardly ever graceful, and quite often positively offensive. But this is only to say that loveliness is not an exclusive standard, and pleasantness not a standard at all.

This inspiration by the Church is illustrated very learnedly and from a narrow angle by Mr. Peter Anson in his recent book, *Fashions in Church Furnishings*, 1840–1940.* It is a chronicle of value to anybody interested in the rise and fall of the Gothic Revival. Mr. Anson has been able to produce hardly anything of value after 1900, although the aesthetic antics of Dearmer and the Baroque Revival antics of the 1920's were occasionally amusing—which is more than the chromium antics of the 1930's were. Many of the objects delightfully illustrated by Mr. Anson are ugly. A Brooks reredos is an unlovely thing, a Butterfield pulpit can be a nightmare, but they are perfectly contrived for the brick churches they were intended for. Even so the price to be paid for the power and directness of the design often seems too high; the manner, however much one may sympathize, is often inexcusably rough and coarse. When the fervour went out of the Revival there was nothing to take its place—Mr. Anson's examples bring this home very clearly. Sedding and his friends made of Holy Trinity, Sloane Street, a museum of fine but unrelated objects; the inner force and cohesion of the Revival had gone although the individual features were finer than most of those produced at the height of the Revival.

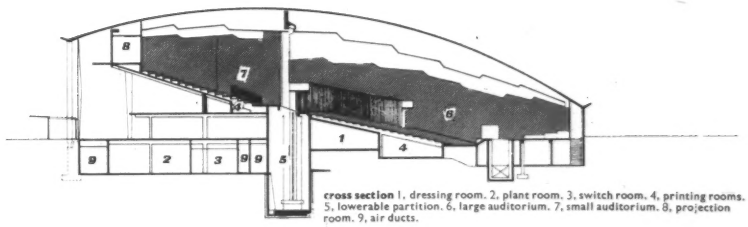
Holy Trinity is a liberal building. The disintegration of the style is a complex matter—and in a sense, having produced Shaw and Webb, it continued long after its apparent death—and Mr. Anson quotes from the late H. S. Goodhart-Rendel the most informative note on the decline. Writing of Bodley's style he said: 'It satisfied completely the aspirations of those who believed that the road to national sanctity lay through the older public schools and universities, guarded by Anglican scholarship from the intruding errors of Geneva or Rome. It was not what the Ecclesiologists had hoped would emerge from their campaign; they had intended something a little more popular, a little more at home in the slums, a little less aloof from the "progressive" temper of the day.' This, and the sentences which follow it, are likely to be points of controversy for later historians. The elegance of Bodley was obtained at a cost, the power of Butterfield and Street at a cost. In mentioning Mr. Goodhart-Rendel's name one can only pay a belated tribute to a great critic and regret that his intended history of Victorian architecture was never written. One can also deplore the fact that his scattered essays—on Lutyens, the Rogues, Beresford Pite and Halsey Ricardo, T. G. Jackson, Brompton, and many others —have not been collected.

The most important recent contributor to Victorian studies is without any doubt Dr. Pevsner. He is, in his guides, familiarizing a generation with post-Georgian architecture and showing that Victorian buildings can be judged, as can any others, by rational standards. It is educational work of a high order and it is impossible to think of anyone else who could have done it. In only one respect does Dr. Pevsner seem open to criticism—as a propagandist for the Modern Movement he seems to have a guilty conscience about his evident admiration for High Gothic. He begins an admirable note on St. Augustine's, Kilburn: 'One of the best churches of its date in the whole of England, a proud, honest, upright achievement, even if suffering (as all High Victorian ecclesiastical architecture must) from a total lack of inspiration in the details.' Here I suspect Dr. Pevsner to have felt all the power and mastery of this great building, and then, with reference back to general theories and views, whittled it down when safely home in his office. The church seems to me of the order of Christchurch, Spitalfields, and nobody objects to the unoriginality in detail of that.

Apart from Dr. Pevsner there has been the massive research of Professor Hitchcock, but still there are no adequate studies of the work of Barry, Street, or Scott. There are no studies at all of Butterfield, Burges, Pearson, Waterhouse or Voysey. There is no study of the Victorian architectural profession. Some of the work is known to be in hand, and it will be interesting to see how the younger historians react to the views expressed in *English Architecture Since the Regency*—in one respect, with relation to the young architects of the 1890's and the Edwardian age, I should suspect they will agree with Mr. Goodhart-Rendel rather than with the editors of THE ARCHITECTURAL REVIEW. In any case, thorough studies of the major Victorians will be worth having—even a brief study of Pearson or Clutton or Teulon would not be unacceptable.

While the historians are working it is salutary to remember that others are differently engaged. Norman Shaw's Flete House was demolished last year, his Harrow Road church is closed, his Makins house in Queen's Gate is to go soon. Euston is all but lost. Salvin's largest house, Harlaxton, seems doomed. Waterhouse's Eaton Hall will soon be demolished. Webb's Palace Green house is threatened. Pugin's Bishop's Palace in Birmingham went last year. The list could be extended; in the near future it will be, vastly. So the historians ought to work a little quicker than the gentlemen of the Royal Commission on Historical Monuments.

* The Faith Press, London. 50s.



cross section 1, dressing room. 2, plant room. 3, switch room. 4, printing rooms. 5, lowerable partition. 6, large auditorium. 7, small auditorium. 8, projection room. 9, air ducts.

AUDITORIUM BUILDING, HAMBURG UNIVERSITY

ARCHITECT | ***BERNHARD HERMKES***

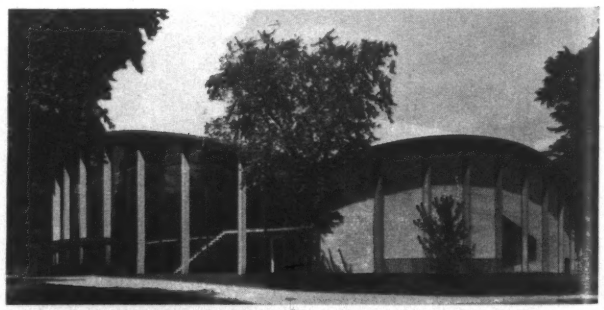
1, the entrance foyer at night.

2

The new Auditorium Maximum building of Hamburg University, designed for academic occasions, lectures, and public meetings of all kinds, seats a total of 1,800 but can be changed into two auditoria by means of a partition which can be lowered into the ground. These accommodate respectively 1,200 and 600 and can be used separately and independently of each other. This requirement caused considerable difficulties, both spatial and acoustical, especially in connection with the design of the lowerable partition wall, which has an area of 2,400 sq. ft. and weighs 107 tons. It is obvious that both auditoria can be used at the same time only if this wall is adequately insulated against sound, and this was the subject of protracted laboratory experiments.

In the intervals between lectures, etc., more than 3,000 students may have to enter and leave the building, and the foyers, entrances and exits of each auditorium are designed to facilitate this traffic. The entrances and exits are kept separate, so that the auditoria can be cleared quickly. The various levels of the foyers not only ensure properly controlled traffic, but enable academic celebrations and social occasions to be held, particularly in the foyer of the first floor. Here, on one wall, is a large relief by Karl Hartung. On the dais, where 140 seats are available for the academic staff,

2. close-up of the main entrance. 3. the entrance on the left and the auditorium wall on the right. 4. inside the ground floor foyer.



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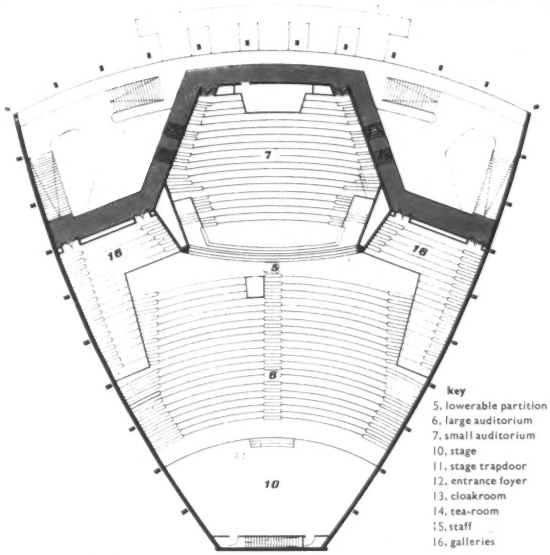
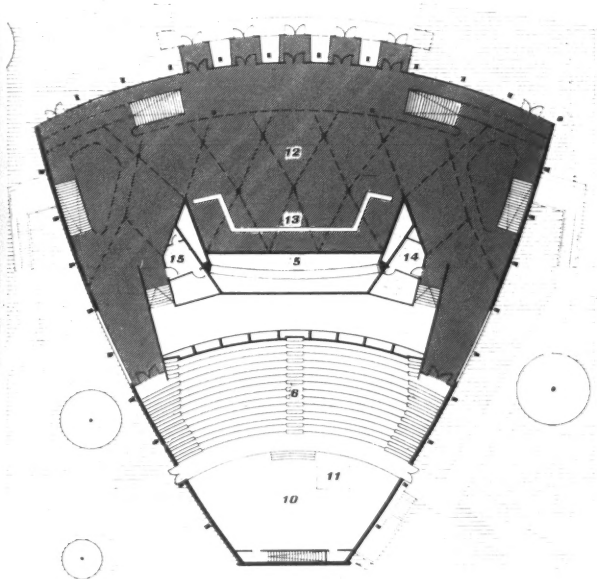


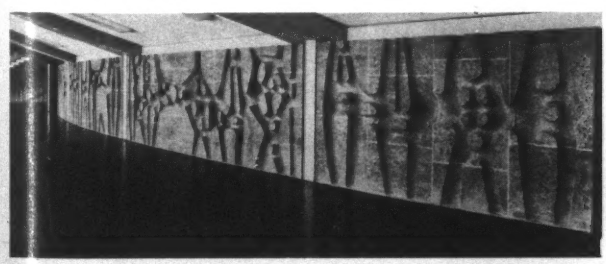
plan at auditorium level



plan at entrance level

there is also space for an orchestra of 60 musicians. The dais is equipped with all apparatus required for concerts, amateur theatrical presentations, ballet and films. The acoustics of the hall have been designed for speech, for solo musical performances, for classical music, and particularly for modern music.

The general shape of the roof gives expression to the large dominating interior of the auditorium. It is a shallow curved prestressed reinforced concrete shell, within which all the other accommodation is contained. The upper part of the auditorium is supported on reinforced concrete columns, round which flows the two-level system of foyers.



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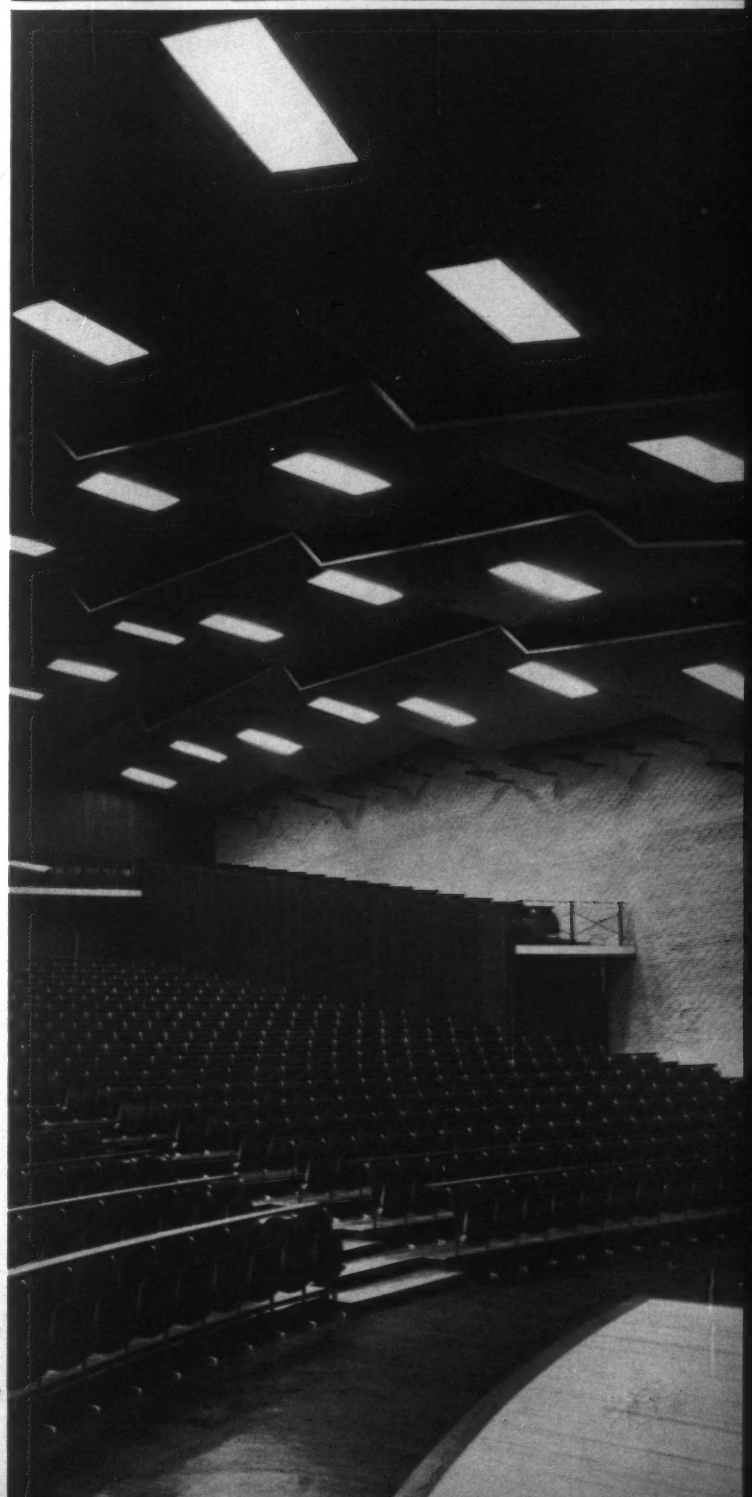
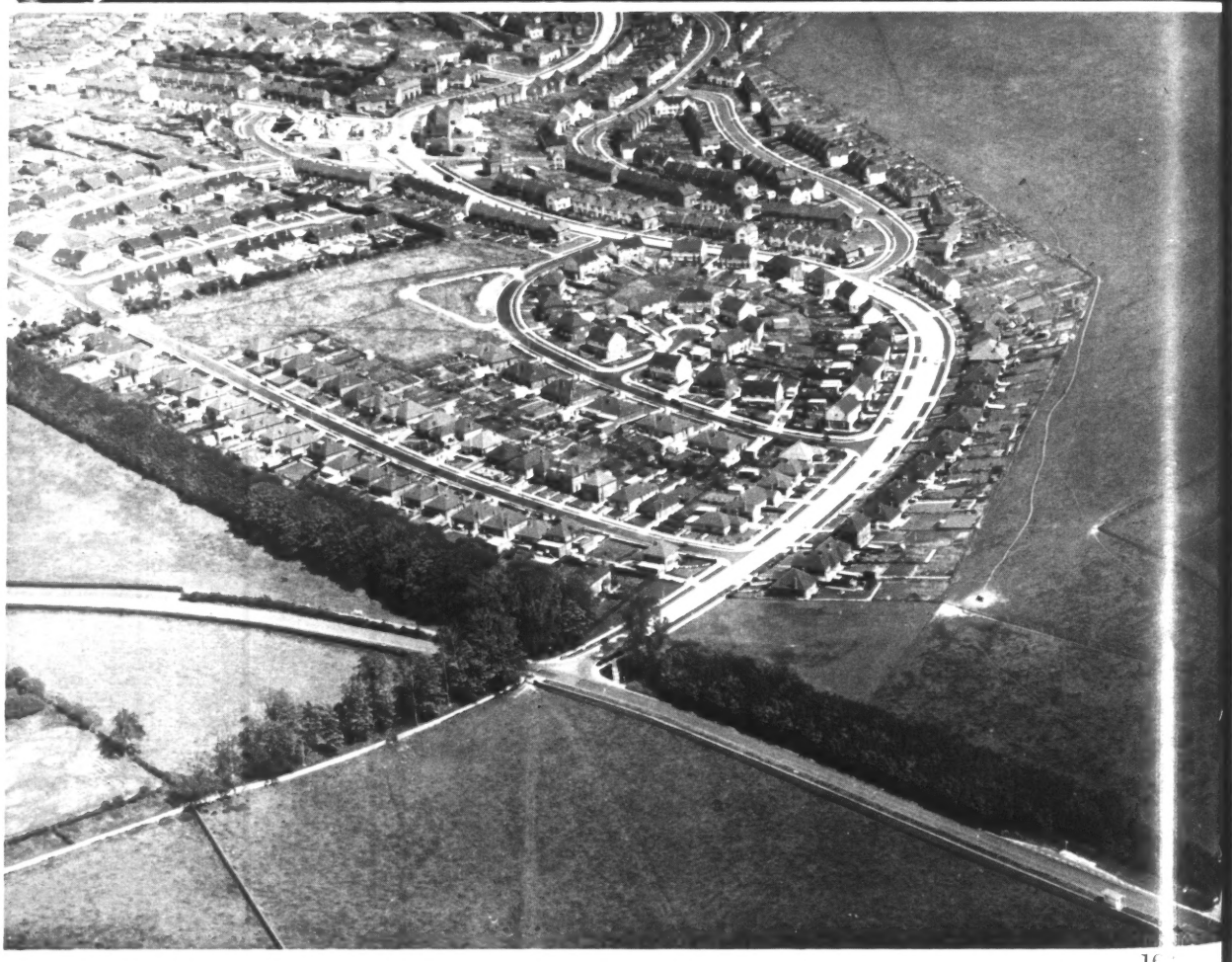


7

5, relief by Karl Hartung on the first floor. 6, looking from the small auditorium to the large one and the stage. 7, the large auditorium from the stage.

1



2

SPEC-BUILT

The speculative builder is on the march again, whenever the planning authority will let him, despoiling the countryside as ruthlessly and thoughtlessly as he did before the war. The two air-photographs opposite, 1 and 2, from one of the most careless of the planning authorities in this respect—the county borough of Brighton—shows that the builder has learnt nothing since the older houses on the site were built a generation ago. Yet although, in the deeper sense, almost all private speculations—and most public ones—neither know nor care how to build intelligently, there is now a big variation between the best and the worst. As well as some planning authorities taking their responsibilities seriously and using the planning acts to keep the speculator under control, there are now at least a few speculative builders trying to promote good architecture. Ian Nairn's article below, which discusses the problem of speculative housing and where it fails, and illustrates some flagrant examples—all recently built—is therefore followed by illustrations of spec-built housing that exemplify the new, higher standard of design occasionally being achieved.

1. THE FOUR FAILURES

Ian Nairn

In 1938 an out-of-hand attack on the speculative builder and the planning machinery which often seems to allow him free rein would have been utterly justified; so it would in 1955, after the terrible disappointment of realizing that the war and its efforts had meant nothing to the developers, that 'the mixture as before' was to be the prescription whenever they could get away with it. But now, in 1961, the situation is not quite the same, and a piece of straightforward abuse has to become to some extent a confused tangle of 'on-the-one-hand-and-on-the-other.' Very slowly, and with no thanks to most of the speculative builders, design is improving. More trees are left, housing units are cleaner and crisper, and—just occasionally—are grouped in patterns which may produce a sense of place. The proportion is still small, perhaps ten per cent., but it cannot be ignored. It is due to three things: to the pioneer efforts of one architect, Eric Lyons, and his clients, Span; to the slow change for the better in public taste (or what the builders and building societies imagine to be public taste), much more noticeable near London than in the provinces; and, not least, to the devoted long-term work of planning offices all over the country in persuading committees to persuade builders to provide something better.

Obviously not all planning offices are doing this; if they were this article would not need to be written. And, naturally enough, the observer looking at the outskirts of Luton or Brighton wonders what is the point of the whole planning machinery, if that is what it produces, or allows to be produced. Something is certainly wrong with it, but it cannot be cured by surface reorganization and requalifications. What happens now is that the planning offices work through a committee which at best is sane, representative and tolerant; at worst a combination of political adventurers and builders and their friends. The average is nearer the worst than the best, but to alter it the party structure of local government would have to be shaken up. That may in the end be the answer —already, at Brixham, two councillors have been elected on a straightforward amenity ticket without political ties—but until such an answer comes the

present ghost of democratic procedure is, I suppose, as good as any. If the planner were made a dictator, the visual gain would not be equal to the human loss. If he had to be an architect it would simply disenfranchise about half of the available good planning officers. If aesthetic control were abandoned there would be a thousand messes of non-relation for each exciting modern house; if it were applied only to non-architects then builders would simply inveigle tame ARIBAS by the hundred. The present rules do at least contain a potential for good results, and perhaps nothing more can be asked of any set of rules. They could be given a change of emphasis, but the real change must be in the way they are applied, and in the minds and hearts of the people who apply them.

This may seem a dreary conclusion, but it is reached because tinkering with the rules will not lead anywhere. The change has got to be in men's hearts, and it has got to take place in all of us, from the Minister of Housing and the professors of sociology downwards. Because hardly any of us understands what we are doing to the inhabitants when we put down a hundred or two hundred identical units in an estate; still less do we know how to achieve a result that will enhance the quality of life and not depress it. Any questions on the lines of houses versus flats are quite irrelevant; accepting the pattern of a house with a garden for most people, accepting the need for dispersal of most people, then what are we making of it?

At the moment, almost nothing. The basic fact about speculative building is depressingly simple—that it is English compromise at its worst, a huge industry geared to mass-produce the answer to a million individual dreams of a-house-with-a-garden. In ninety-nine per cent of cases it creates a lowest common denominator, a collection of houses-with-gardens which are individually not quite what anybody wants and collectively form little textbooks of social sterility, endless windy lanes down which the prams trundle back from the bus stop, whilst the ice-cream van chimes its weary way (those chimes are often the only sign of life in a square mile or so and, dear God, some people want to stop them). It provides only a fraction of the answer to a real environment, and at a fearful cost, the cost of breaking up the pattern of town and countryside permanently and replacing it with subtopia.

Except in a moral sense I suppose it is not the builders' job to worry about producing a worthwhile environment. However, if the last fifty years of builders had heeded their moral obligations they would not now be facing a shortage of land: amenity, you see, does have its value. For if building had been elegant and heedful and prudent of land (and it was exactly that, for example, around London in the 1810's and 1820's) nobody would be objecting to it going on. If builders had had the sense to make their own green belts, none of the present machinery would have been necessary. For someone viewing this scene at a distance the sum total of achievement of the spec-builder over the last century is to have sawed at his own windpipe until it is almost severed. Hearing the unexpected rush of air, he blames the very regulations that were forced into being by his earlier excesses. A very human reaction, but not one which deserves much respect or very long shrift.

Overall, the picture of new buildings adds up to failure, or to four separate failures: failure of design, failure of colour, failure in relationship, failure as social units. But remember that of these four failures, many architects are guilty of the first three, and almost everyone is guilty of the last. In shooting at Mr. Developer it is also our own guilt that we are trying to purge.

Failure of *detailed design* is oddly enough the least important of the four, and the only one which can be argued as a matter of taste. The other three, involving the whole environment, are more like moral imperatives—or if that sounds too sanctimonious, like Pope's 'something previous e'en to taste—'tis sense.' Aesthetic control has always concentrated on the minutiae of detailed design and ignored the larger questions of relationship—hence the large number of disgruntled young architects. But because a thing is misapplied it does not mean that it is wrong—one might as well reject Christianity for leading to the Inquisition or the Index. A change in emphasis is needed from what goes on inside the housing package to the way in which the package relates to the neighbouring packages, old and new. And in fact the design of the units is slowly but steadily improving. Today about one-third of the estates have units that are basically decent: that is, simple cottage units without the artificially tickled-up stimulants to people's dreams (live in an olde manor house, etc.), which is the worst feature of the whole process of building for profit. What they now need, perhaps, are curly bits that *aren't* artificially tickled up.

To talk about failure in *colour*, as separate from detailed design, may seem to be reproducing the kind of artificial distinction which makes aesthetic control such a barren subject. But in fact, as most English villages can show, if the building unit is in relation to the surrounding units and fits into their colour pattern the actual style and detail don't matter much. In other words, with an alteration of areas of freedom and restriction, aesthetic control might be made a more workable instrument. At the moment, in many estates, the units are almost identical but can be supplied in a complete box-of-bricks range of colours. The result is a brouhaha; where matching of colours is attempted (I am thinking especially of the horrible 'amenity green' roof tiles) it is done as an imitation, not a complement; the colours are not deep enough, nor strong enough, but merely pallid reflections of the existing tones. The effect is not of harmony but of one person playing flat in an orchestra —or of a 28–26–28 in a line-up of 36–24–36's in a beauty competition.

In general the colours need to be deeper and richer—and in many parts of the country they could well be new colours in deliberate counterpoint (like the accidental counterpoint in some Northants villages of deep brown stone and deep red brick). We can now make any colours we want and transport them anywhere we want: this could mean chaos, but it could equally mean a new constructed order, with the

[continued on page 169

3

4

SPEC-BUILT

This series of air views, all of recently built housing, begins with a site that is not a private speculation at all, but a new Oxfordshire village, council-built, on the site of Mount Farm airfield near Dorchester, 3 *(above). Here there was the chance to build any kind of imaginative shape; instead, there are the familiar units in rows which are no real advance on the nineteenth-century pit village. It is shown here as a reminder that if official planning fails as badly as this, it is hard to condemn the commercial speculator out of hand. Moreover, this kind of design may well represent what many planning authorities think new communities ought to look like, and therefore what they are willing to approve when speculators' plans come before them.*

But to be fair, the explosion that has affected America has been prevented, and this is due entirely to the planning authorities. Many estates for much of the time are in more or less the right place. There are plenty like 4 *(Chobham), which is trying to do its best to knit up the surrounding lack of pattern—is in fact making the best of a bad job. There are also plenty which do not try quite so hard:* 5 *(East Grinstead), which may have looked sound enough on the map but turns out to be all wrong in fact, pushing a wedge of blancmange where it isn't wanted. The railway line, here, was not the natural boundary and the inference any smart spec-builder will draw is clear, that he can get away with more up to and probably into the trees. Rounding-off has become jutting-out.*

air photographs by W. J. Toomey

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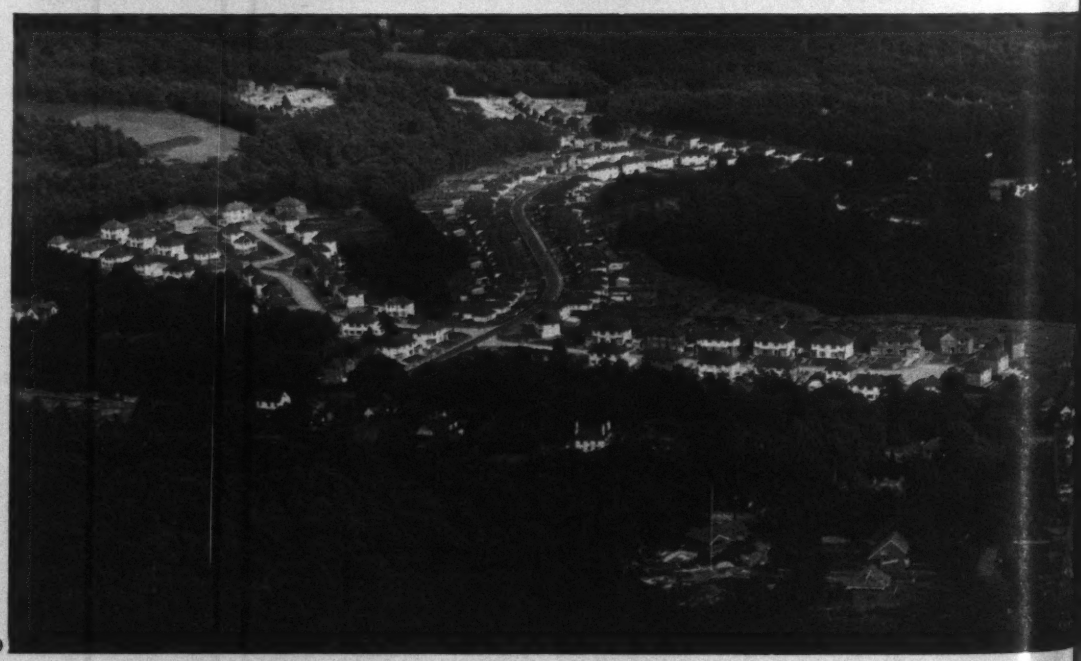
8

The same point is made, more simply, by 6, *in south-eastern England. What are we doing to be scattering houses like pepper on the countryside? Once an outline permission is granted, anything seems to go—yet it need not: there are conditions of consent waiting to be implemented.*

Observe the map of futility in 7, *'somewhere in Essex' (that it has not the slightest feature to identify it is a fearful confession of failure). What does Mr. X at the bottom, who likes gardening and has a short garden, think of Mr. Y at the top, who stays at the pubs all day (LH* 11–3, 6–10.30, *as the AA handbook has it) and has about a hundred yards of turf. It is a farce, in human as well as aesthetic terms. And in* 8, *the dear dead outskirts of Reading beyond recall, what did the planners do? Kept the hedges and the trees, but failed to see just what the street perspectives would be like, just what it means to grow up in one of the houses around the keyhole. Work out the distance to the nearest shop, let alone the nearest church or pub.*

Planning can preserve trees—sometimes. 9 *is a bit of Camberley after the builder got there; Camberley, of the pinewood and gravel roads—Betjeman told no lies—arcadia as only England could produce it, demeaned to be a robot-hutch. Of course nice people live there: the crime is not committed by them but on them, and on their children. To plant people at this density in separate units is like giving each rush-hour traveller a separate carriage,* 6 *ft. tall and* 18 *in. square. There are other people in the world, and we have to live with them. 'My separate house' when the house is the nineteenth in the row, is a mockery, as well as being more expensive.*



9

Other generations were wiser. Cowfold in Sussex, 10, *is in its way one of the best villages in England, the houses all turning in on the churchyard with their backs to the road. Cowfold's new houses (at the top of the picture) have their backs to the road too, but not to any corporate effect, merely to emphasize the isolation and the second car (and some architect did them, by their looks). Observe the wire fence with which New Cowfold declares its distaste for old, as if to say 'The villagers, my dear, every day, like* rabbits. *Jack goes up to Horsham and doesn't see it.'*

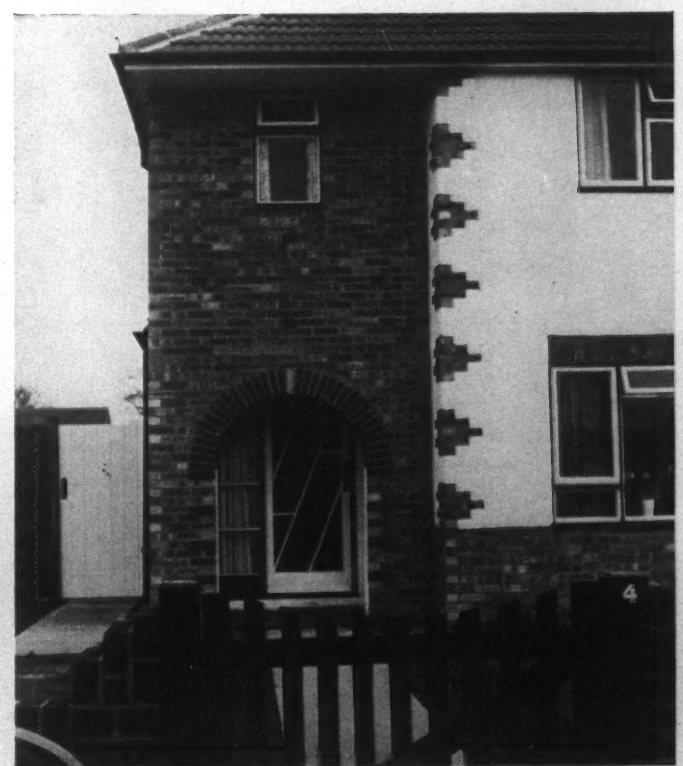
To come to simple landscape-rape is almost a relief. Basingstoke, 11, *shows itself (like Brighton—the two pictures on page* 162) *an authority with too much power and not enough sensibility. In both, the raw material is rolling chalk downs, downs asking to be met by rolling compact rhythms as though like a fugue they were incomplete without a second subject—nature and man, in harmony. And all they get, all we can provide, is a spewing, regardless of the landscape or the people who have to live there. It is little use sinking slowly in a little boat and boasting: 'at least we aren't sinking quickly like that big American liner over there.' The water comes into the lungs just the same, in the end.*

10

11

Next some closer views—all once more of speculative housing recently built. 12 *(below) may look like a flashback to the* 1930's*; it is at Lockerbie, a comely little town in the Scottish lowlands, but is in fact barely two years old.* 13, *at Banbury, looks like something from the Wembley exhibition yet it is in a way easier to take than* 14, *from the same estate, which has given itself genteel airs as though it had read one of the women's magazines on home decorating. What the builder of* 15, *at Disley, had read is more of a puzzle. It is good fun as a joke, but as a serious attempt to satisfy people's wish to decorate it is contemptible.*

12



13

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15

photographs by Ian Nairn

16

17

18

SPEC-BUILT

'Leaded lights and bow windows' is a kind of joke phrase used to summarize the house of the 1920's; here they both are in the 1960's in a new house, 16, *at—of all places—Coventry. One can understand the impulse while deploring the results, though they are in fact no worse than random windows, style Le Corbusier.* 17, *at St. Albans, is an example of the strange quirk that leaves the narrowest possible gap between houses and calls the result 'detached'; also of the will-to-decorate coming out in trellis and venetian blinds.* 18 *is a corner treatment at Coventry—the last city where such architecture might be expected, but if it is a reaction from the dullness of most local council housing, then more people are at fault than the builder. To combine a 1930's corner window and leaded lights with 1950's cedar boarding is anyway something of an achievement.*

When all such oddities combine, the result is a kind of Dada landscape, like that of Market Harborough, 19. *And strangely enough, a not very different effect still results from employing identical units, as at Hazel Grove,* 20. *Whether the units are absurdly different or exactly the same, they are both put together without any wish to make the whole greater than the parts.*

When delightful surroundings are brought into the picture, the measure of the builders' and the planners' failure is clearer. 21 *is at Disley, on the edge of the Peak District. When, as seldom happens, streets of spec-housing are narrow, as in* 22, *at Coventry, the result is a grisly parody of the English village street, yet this might conceivably have been made into a worthwhile place, given different designs and details, more relationship between units and more variety in uses.*

But such streets are more often wide—absurdly wide for the scale of building—and the familiar view is that of 23, *at Luton, or* 24, *at St. Albans, which could be repeated by the hundred up and down the country—endless fragmentation; the hideous lamp-posts taller than anything else; an invitation to suicide. And the sameness of these last two pictures is the greatest condemnation of all.*

19

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21

22

23

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continued from page 164

regional patterns being intensified rather than diluted. It is practicable, and it could carry a worthwhile inducement to builder and brickmaker, in the shape of easier planning permission. It is already done on a small scale—in Cumberland for example, they are using a red-brown brick to match the red sandstone, and not a genteel colour, but a full-blooded, strongly-textured one. The best match for a limestone village is often not soapy reconstructed stone but a simple honest straw stock brick; the purple bricks now appearing around London would be a perfect complement to the dark red of Staffordshire, and so on. It is not an unrealistic step back, but making full use of the freedom that technology has given us. Before, fitness arose naturally out of need; today, perhaps as a step in evolution, we have to create it consciously. It is a much harder job: it is in fact the real meaning of the catch-phrase 'the price of progress.' The price asked is not a lowering of standards but an enlargement of man's area of control and self-control.

Replacing the unconscious and instinctive by the conscious act of judgment is exactly the area of the third failure, the failure in *relationship*. This, simply, is how the unit matches up to the units on either side of it. Before, it happened instinctively; now we have to create, consciously, pattern out of separate units, choosing harmony or counterpoint as appropriate. It is a protracted essay in abstract geometry worked out with screen walls or fencing or terracing of units or siting of houses to compose, not disrupt. Or to disrupt, not compose, if the whole character of the place is disruption: chaos can be fun too, though not all the time. The job is only begun, not ended, when a decent house-type is evolved; time and again, pleasant units make an unpleasant place through lack of relationship.

To bring taste into this issue is often a carefully arranged red herring. There are enough different ways of achieving relationship to satisfy every kind of taste, but the need for achieving relationship is at a deeper level altogether. This principle is of course tacitly accepted in the framework of Public Inquiries, but it could be made more explicit and effective. It is so much more rewarding a field for the exercise of the Puritan in all of us than prostitution or playing polo on Sundays.

Fourth and finally, there is failure as *social units*. Here of course there is no intention to single out the speculative builder. Almost everything we have built since the war, from Pimlico and the LCC estates downwards, has failed as a social unit (or has succeeded in spite of its layout). It must be sadly self-evident to the housewife with a pram and to her hubby in the car-body factory, that what you can't walk to comfortably is not part of your own community but Somewhere Else. Community depends first of all on the accidents of convenience and propinquity. Hence every big housing estate should contain inside it—not tucked away at one end in a space given a different colour on the development plan—corner shops, fish and chip bars, ice-cream parlours, pubs, lending libraries, betting shops.

The whole idea of shops and houses as separate things needs to be shaken up; every house ought to be able to be converted into a small shop, open if necessary a few hours a day only. If Mrs. Kelly at Dunromin wanted to make her front room into a tobacconist's shop, think of the furore in the local planning committee—whereas X Developments can buy up the whole of a town centre and everybody says 'jolly sound investment' and moves down the agenda. Life must be taken out of its sterile compartments and re-made whole again, and this means that the whole conception and application of zoning has to go overboard, otherwise you can fiddle with trees and bollards for as long as you like and it will still be a hunting ground for sociologists and an understaffed police force. Because there is no other alternative, the whole level of vitality gradually wanes and it becomes harder and harder to break out. At Harold Hill in Essex, one of the worst of these no-places (it was built by the LCC, but it could easily be a big speculative estate), there was reported recently a remarkable drop in beer-drinking and drunkenness. Admirably law abiding, says everyone. Then, in the last lines of the news items, the truth comes out—the pubs are about two miles away from most of the houses. It is indeed a loaded alternative.

The pub allusion is a specialized need, if you like; but translate it into terms of a heavy load of shopping twice a week, waiting for London Transport and its merry men—or even into a passed driving test and a Mini-Minor in a windy car park—and it represents such a degradation and etiolation of life that a flat in the Gorbals comes to be *qualitatively* better. It is not at all the fault of houses-with-gardens, but of how the houses-with-gardens are arranged. The situation on a large scale needs a change which is above any set of rules; on a small scale the existing controls don't need replacing, but they do need a change of emphasis and a more variable scale of use. A change of emphasis away from detail design and towards the more important overall relationship with other buildings—proportion, scale, continuity, street-line.

If suburban villages are going to be expanded on any large scale this job is too much for an overworked area planning officer, and each village might be given to an architect or planner as his particular charge, so that he would know its needs and patterns inside out and be able to put forward a statement of amenity that would be something more than a few stock words wrapped in a fog of Civil Service English. A more variable scale of use would recognize that there are hundreds of places in England where any kind of aesthetic control is absurd (they are often precisely those places which shout loudest about having a modern house put into them). In fact their only hope is *lack* of control and exploitation of the bizarre and accidental. What the builder puts inside them in the way of bricks and mortar should be his own affair. But the old village centres, and particularly the older parts of towns which are given such scant consideration by planning committees unable to recognize any aesthetic effect more subtle than Versailles or the Oxford skyline, need much stricter control of relationship.

Paradoxically, this might result not in any loss of individual freedom but in an extra dose of it. The choice given to most house buyers at the moment is as

completely artificial and irrelevant as a choice between political parties. The roof colour X, Y or Z, the gable faced with this or that. But if the units were terraces or otherwise part of a pattern, and if the overall colour pattern were fixed—say of the roof covering, which is the most important part—then prospective house owners could genuinely do what they wanted about arranging and decorating the front—especially around the front door, which is psychologically the most important part of the house. If individuals clashed it would mean no more than do different colours on the front doors of a Chelsea terrace.

More flexibility, more subtlety, more humanity. Without these, there will certainly be no radical change in the dreary outlook for millions of British families, the drags to the bus-stops, the aimless adolescents, the enforced loneliness and enforced companionships. I am not trying to make out that life in a housing estate is hell on earth—but it could be so much better than it is.

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2. A FEW SUCCESSES

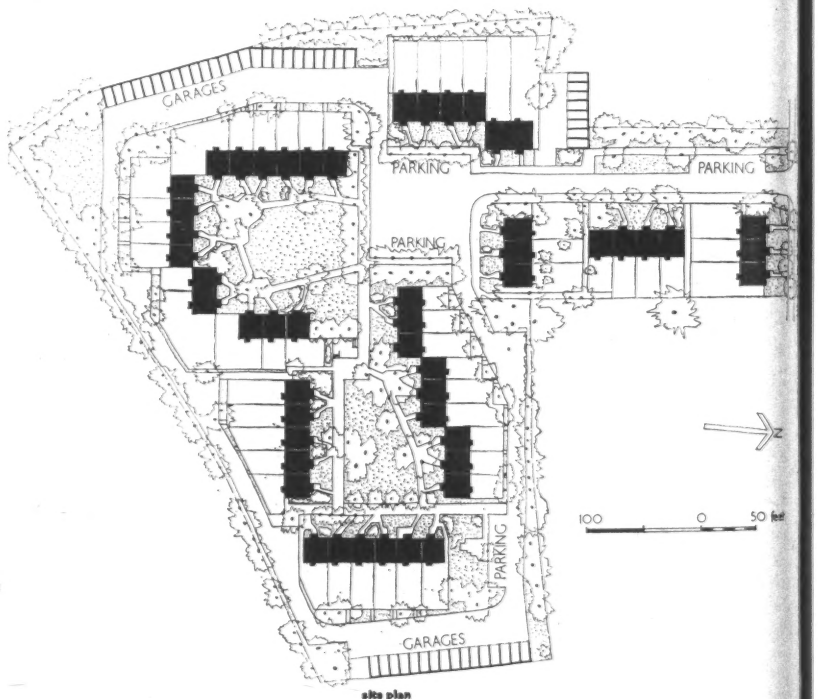
On the following pages, as a contrast to the discouraging photographs on pages 165 - 168, are a number of recent housing schemes put up by speculative builders or developers which show that at last a few of these mind about good architecture and are commissioning good architects to work for them. Appropriately, the first two schemes illustrated are by Eric Lyons whose housing for Span Developments stood alone for so long and to whose pioneer work the other schemes illustrated clearly owe much.

HOUSES AT TWICKENHAM architect, Eric Lyons

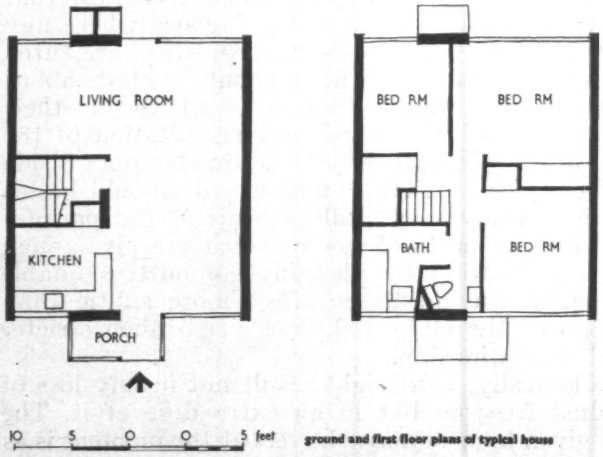
Fifty-one houses at Waldegrave Park, laid out round an informally shaped green and its approach-road. The green is restricted to pedestrians, and car-parking areas are disposed round the site. Forty-nine garages are in three blocks on the perimeter service road. There are no private front gardens as the central space is designed as a single landscape. Each house has a small enclosed back garden, giving on to the rear access. All the trees existing on the site are retained and more have been planted. Variation in ground-pattern is provided by areas of formal paving, turf and shrubs.

The houses are all two-storey, with three bedrooms and a dual-aspect combined living and dining room. This open ground floor plan is made practicable by underfloor electric heating and by the cross-wall construction, which is of 9in. brick. Floors, roofs and infill panels are timber, the last being covered with weather-boarding. The ground-floor full-height windows are double glazed.

Built for Span Developments.

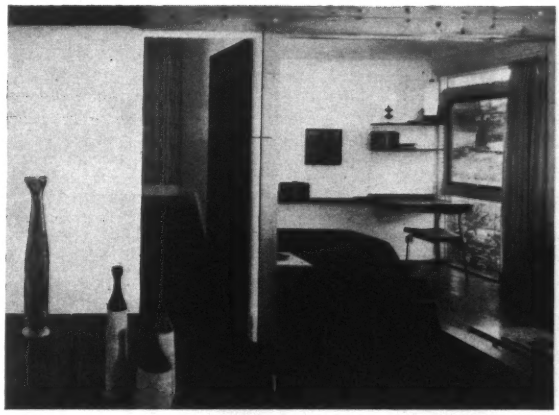


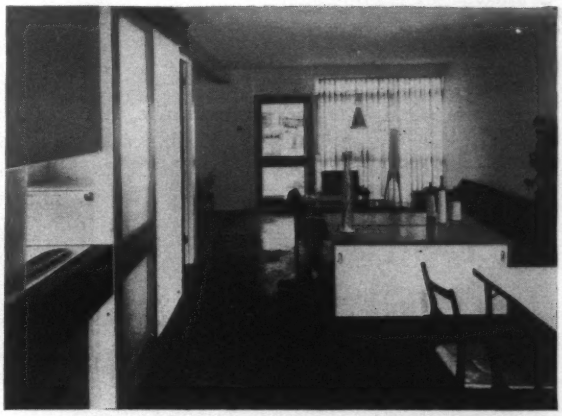
site plan



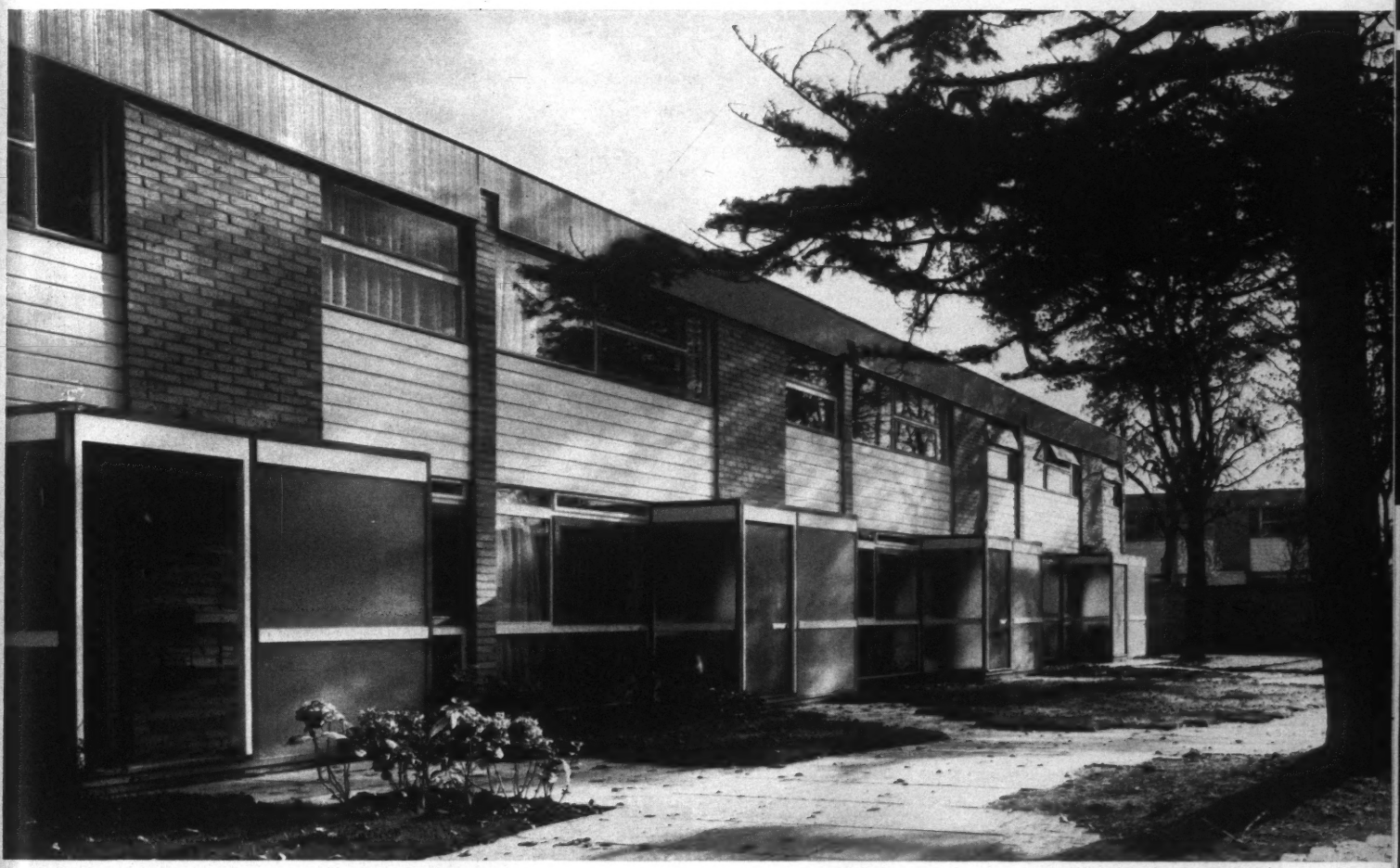
ground and first floor plans of typical house

1 2





1 and 2, the combined living- and dining-room in one of the houses at Waldegrave Park, Twickenham.
3, a row of the same houses, from the central green.



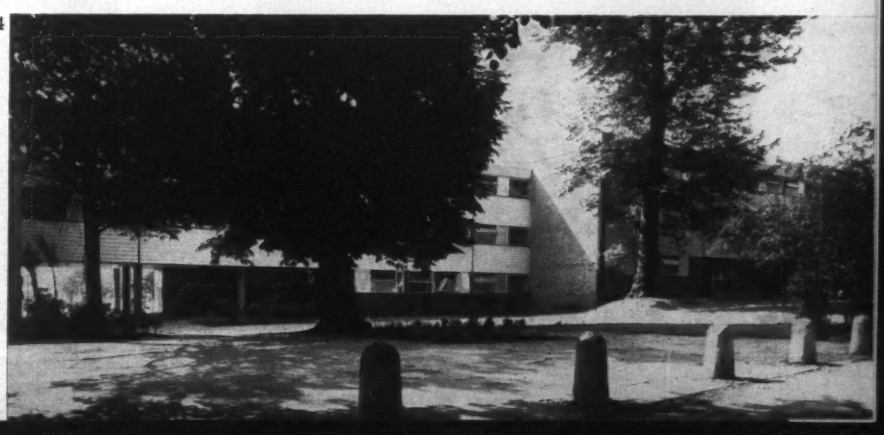
3

FLATS AT BLACKHEATH architect, Eric Lyons

Twenty-six flats arranged in three-storey terraces in a landscaped garden and forming the third stage of the same architect's larger development known as The Hall —see AR, February, 1959—a mixed development of flats and houses on the gentle slope below Blackheath Park. Blocks of garages and parking-spaces run parallel with the flats—see site plan overleaf.

The flats are of three types: A, with living-room,

4

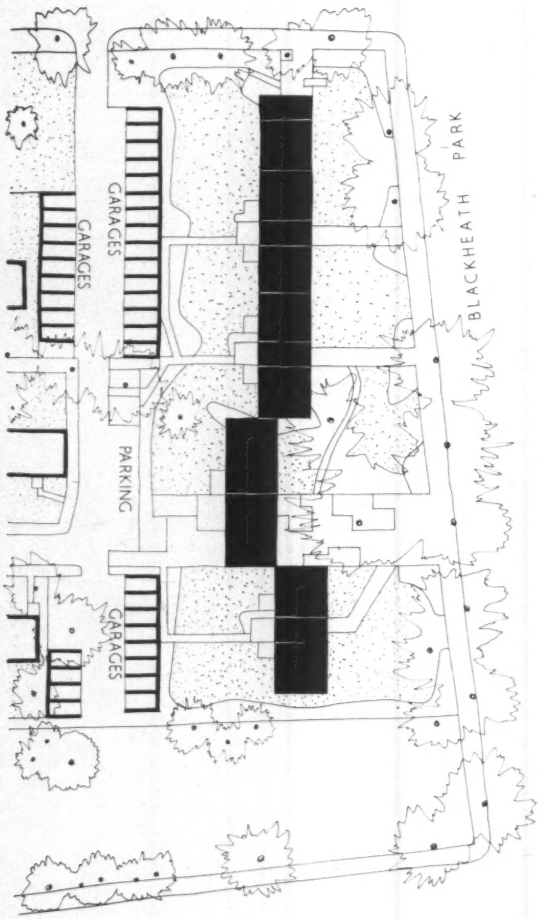


4, the terrace of flats from Blackheath Park.

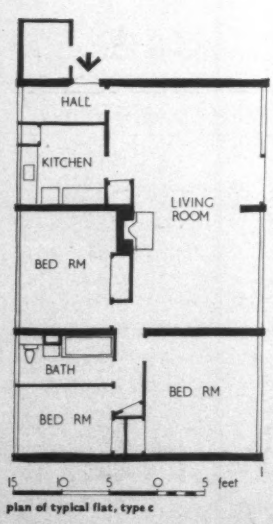
flats at Blackheath

dining-room and two bedrooms; B, the same with the addition of a study; C, with a double-size living-room and three bedrooms. The plan at the foot of the page shows type C. As in the Twickenham scheme, infill wall panels are weather-boarded.

Built for Span Developments.

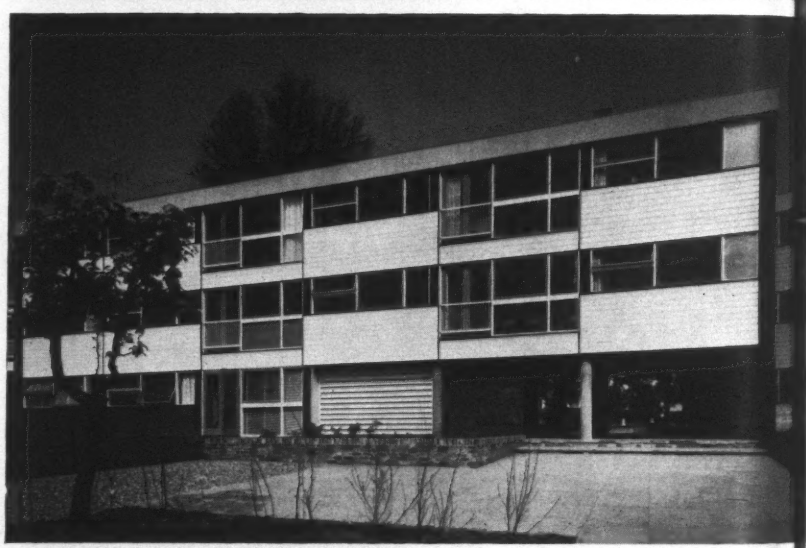


site plan



plan of typical flat, type c

5



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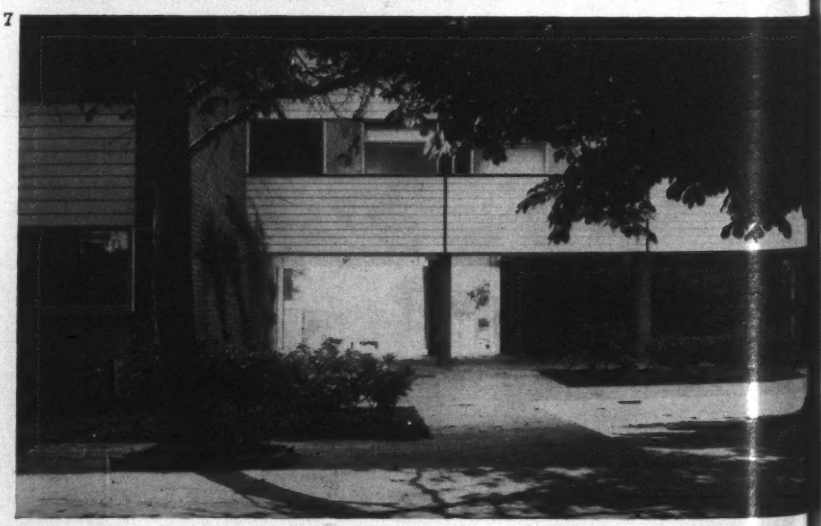


5, from Blackheath Park, showing the underpass beneath the central of the three terraces.
6, the living-room side of the flats.
7, looking through the underpass.

HOUSES ON CAMPDEN HILL, KENSINGTON

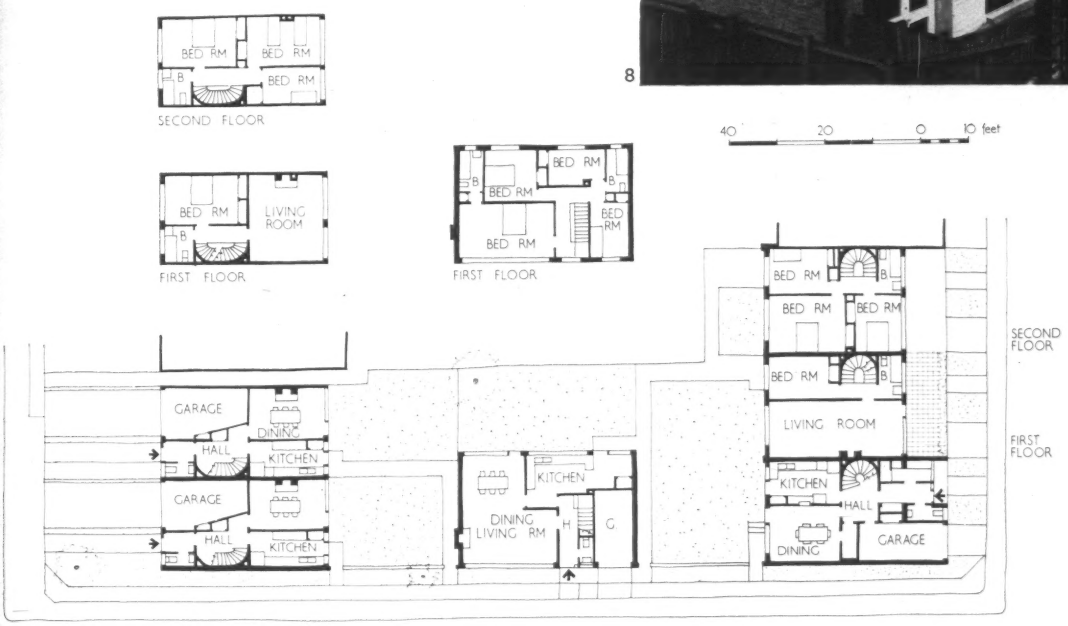
architects, Dinerman, Davison and Hillman

Six two- and three-storey houses laid out with linking walls on a site fronting Aubrey Walk, Aubrey Road and Campden Hill Square. They are of three types—see plan of the whole group below—all with four bedrooms, the two-storey house having a larger ground-area. It also has a combined living and dining room on the ground floor, whereas the three-storey types have a separate first-floor living room. Each type has a built-in garage.

The houses are of brick cross-wall construction, with panel infilling faced with tile-hanging, dark brown in colour. Facing bricks are London stocks. Roofs are timber. Windows are softwood pivoted type in hardwood frames. Heating is by radiated hot air from a gas heating unit in the kitchen, with outlets to all rooms.

Built for Grosbern Properties.

8



9

8, the group of houses from the rear: on the left the two-storey type; on the right a pair of the three-storey type.
9, the Aubrey Walk frontage, showing the entrance front of the two-storey house.

FLATS AT IPSWICH architect, Peter Barefoot

A block of four flats, in two storeys, with a block of four garages alongside. These are intended as the first stage of a larger development, providing 18 flats in three blocks forming, with the lower garage blocks, an enclosed quadrangle. The flats have one bedroom only, being designed for single people or for married couples without children.

The flats are of cross-wall construction with load-bearing brickwork (designed to take the load of an additional storey if required) and infill panels of light timber framing, boarded externally. Floors are reinforced concrete. Each flat has wall convector heaters.

Built for G. H. M. Eyton-Jones.

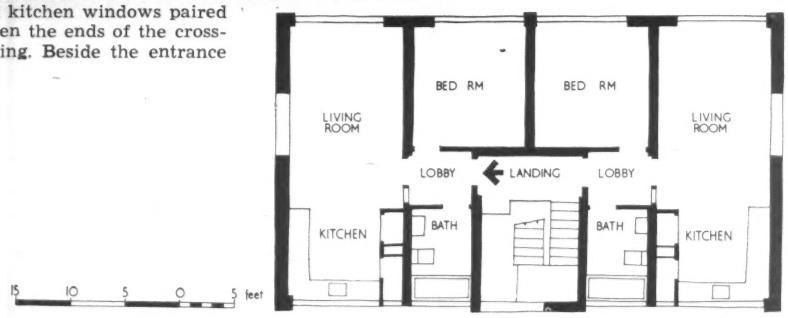
10

10, the garden side of the flats, which will eventually form one side of a quadrangle. All bedroom and living-room windows face this way.

11

11, the entrance side of the flats at Ipswich, with bathroom and kitchen windows paired on either side of the entrance and staircase. The infilling between the ends of the cross-walls is lightweight timber framing, faced with weather-boarding. Beside the entrance is a tile-mosaic panel.

flats at Ipswich



HOUSES AT DULWICH architects, Austin Vernon and Partners

Part of a large estate (see site plan opposite) being developed on Dulwich College property, off Farquhar Road. The houses are all four-bedroom type, of three storeys (one in the roof), planned in short terraces. The site was wooded and most of the trees (not shown on the plan) have been retained. The houses are approached from a private front service road by way of a paved forecourt partly screened by a garage on the road frontage. Each has a garden at the back, and a small terrace screened by wing walls.

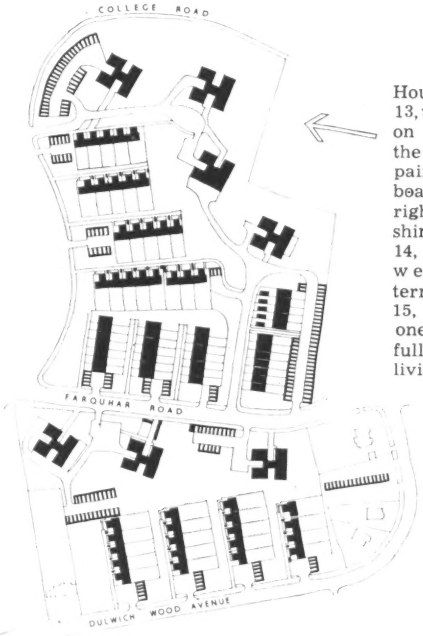
They are of brick cross-wall construction, with front

12

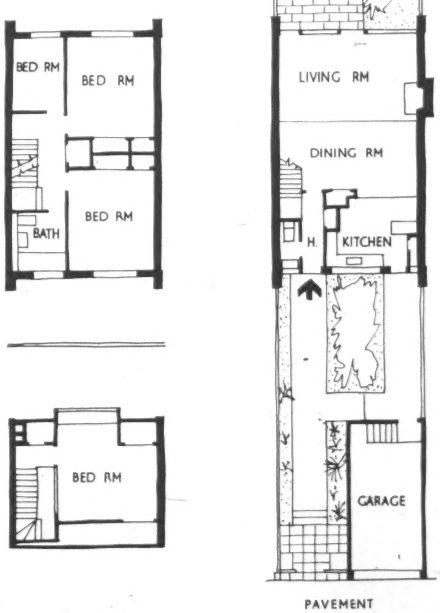
12, the rear of one of the terraces of three-storey houses, showing living-room windows opening on to the garden. The wall-facing is cedar shingles.

panel walls faced with cedar shingles and rear panel walls with shingles or horizontal boarding. Roofs are covered with Welsh slates. Floors are timber, running parallel with the cross walls and supported on steel and concrete beams. Central heating circulates warm air through louvres into the kitchen, the two-level living-dining-room and two of the first-floor bedrooms.

Built for Messrs. Wates.



site plan



plans of typical three-storey house

Housing at Dulwich. 13, two terraces facing on to gardens: on the left with white-painted weather-boarding; on the right with cedar shingles.
14, garden front of weather-boarded terrace.
15, detail of front of one house, showing full-width window of living-room.

13

14

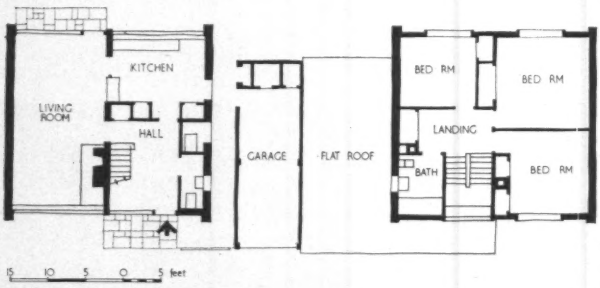
15

HOUSES AT WIMBLEDON architect, John Macalpine

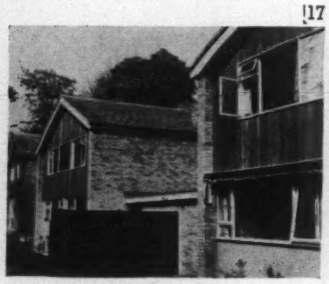
A row of four two-storey houses in Seymour Road; the end ones detached; the two centre ones linked by a garage block between them, extended to form porches. Each house has a large living-room but no separate dining-room, and three bedrooms.

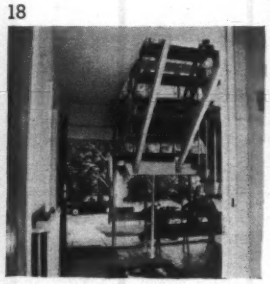
Construction is load-bearing brick, with gable walls filled with timber panels and Western red cedar boarding. The lower part of the gable walls is rendered on brick backing. Roofs are covered with concrete slates. The houses are centrally heated from gas boilers.

Built for Cameron Land and Development.



plans of one of the centre pair of houses



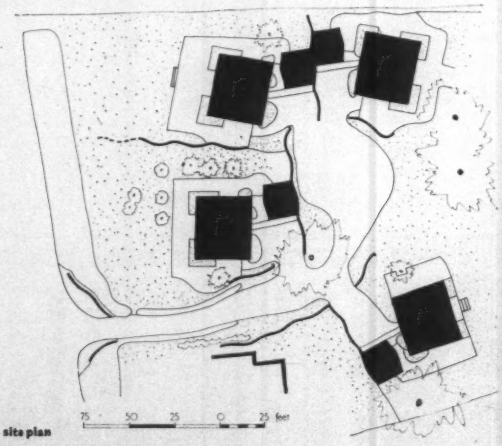


17 18

16, three of the four houses, from Seymour Road, including the centre pair linked by porches and garages. 16
17, three of the houses from the back.
18, an entrance hall, showing the suspended staircase.

HOUSES AT KINGSTON, SURREY architect, Patrick Gwynne

A group of four detached houses at Coombe Hill, designed for the higher-income group but planned in an informal way, without front gardens, round a communal garden area, which is unusual for houses of this type. The site is well wooded with good views. Linking and enclosing walls are serpentine in plan, making intermediate piers unnecessary. The basic house-plan has a central staircase lit by a dome in the flat roof. Down-



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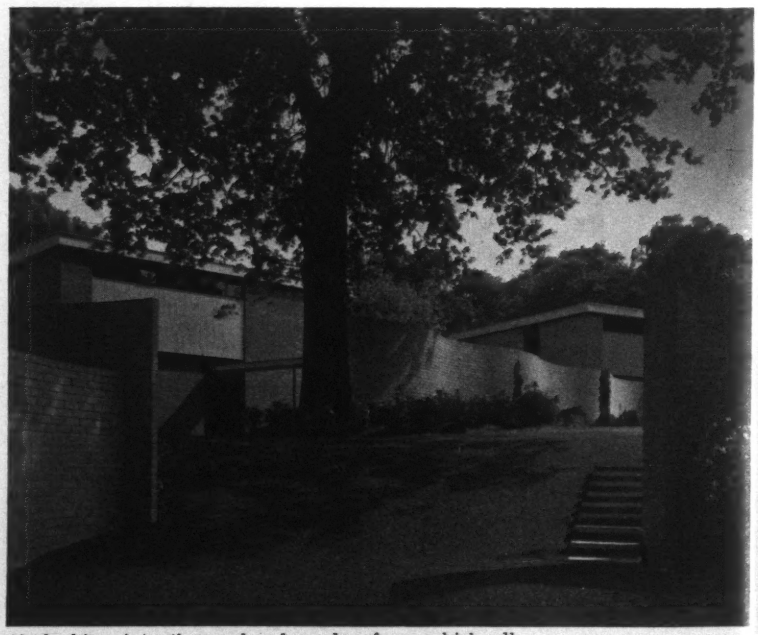


19, looking into the enclosed garden from which all the houses are reached. Note the serpentine walls. 19

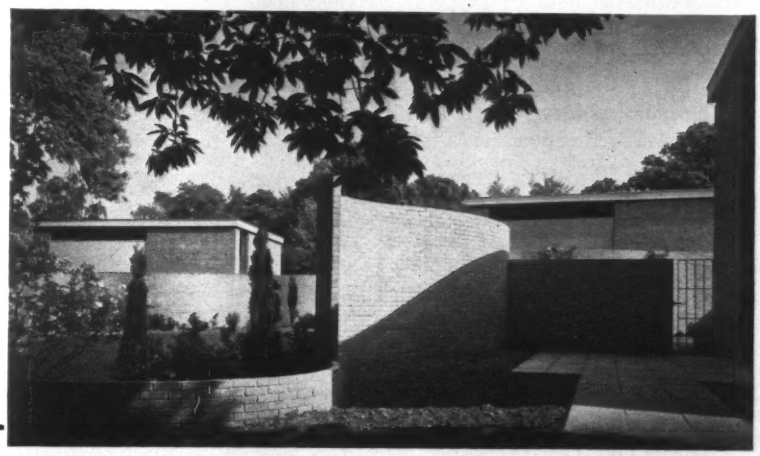
pipes and flues use the staircase well. The living-room is L-shaped, allowing a dining space to be screened off. There are four bedrooms, the main bedroom having a dressing-room and breakfast balcony, and two bathrooms. The garage is detached but reached by a covered way. In two of the houses the orientation is the reverse of that shown on the typical plan.

The load-bearing walls are of concrete bricks of a different shade for each house. All garden walls are yellow brick. Floors are concrete and the roofs timber. Windows are steel casements in hardwood frames. Each house has electric floor heating in both floors.

Built for Aledma Estates.

lans of a typical house

20



21

20, side and rear of one of the houses. 21, two houses seen beyond the serpentine screen walls. 22, three of the houses surrounding the common garden. On the left can be seen one of the covered ways that links each house with its garage.

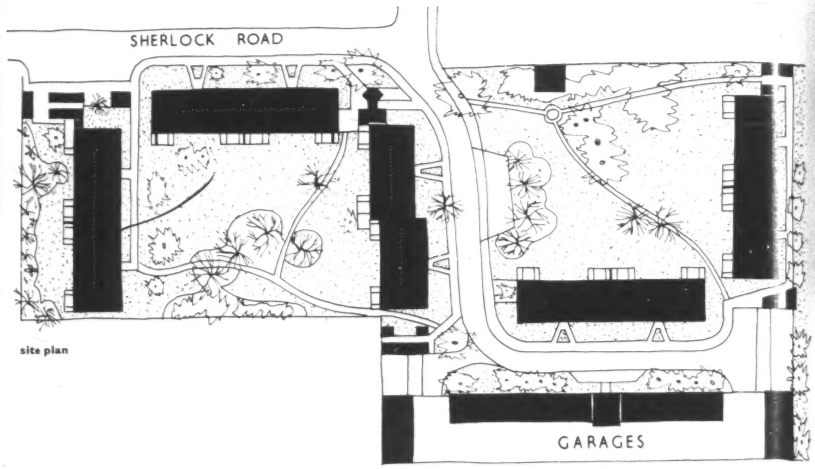
22

FLATS AT CAMBRIDGE architects, James and Bywaters

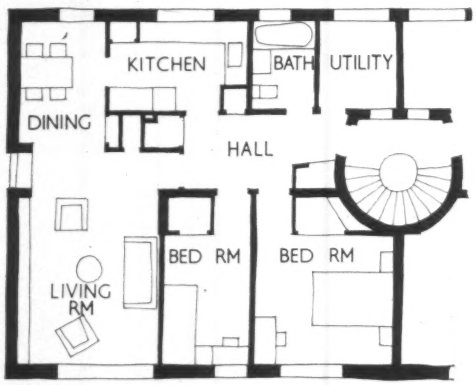
Near Huntingdon Road and the site of Churchill College. The scheme contains 60 flats in five three-storey blocks of 12 flats each, planned round two garden courtyards (see site plan) with 30 garages in three separate blocks at the rear, screened by walls and trees. Parking spaces off the approach road are also screened by planting and by a grass-covered mound. Each group of six flats has a separate entrance, leading to a central circular stair. Each flat has a dining-space off the living-room and two bedrooms.

Walls are load-bearing brick, panels of black wire-cut brick alternating with brickwork painted white. On the sides facing the gardens the upper walls are tile hung. Living-room windows are aluminium sliding sash. Each flat has gas-fired central heating.

Built for Peploe and Partners.

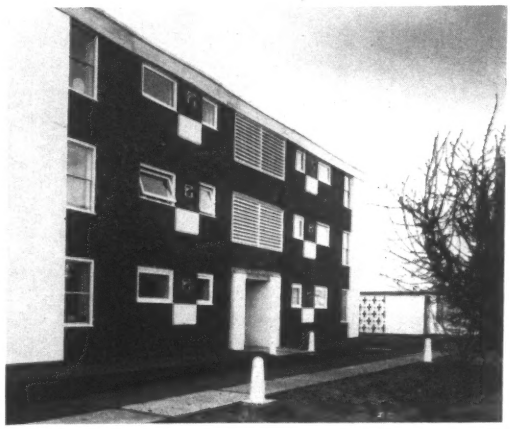


site plan

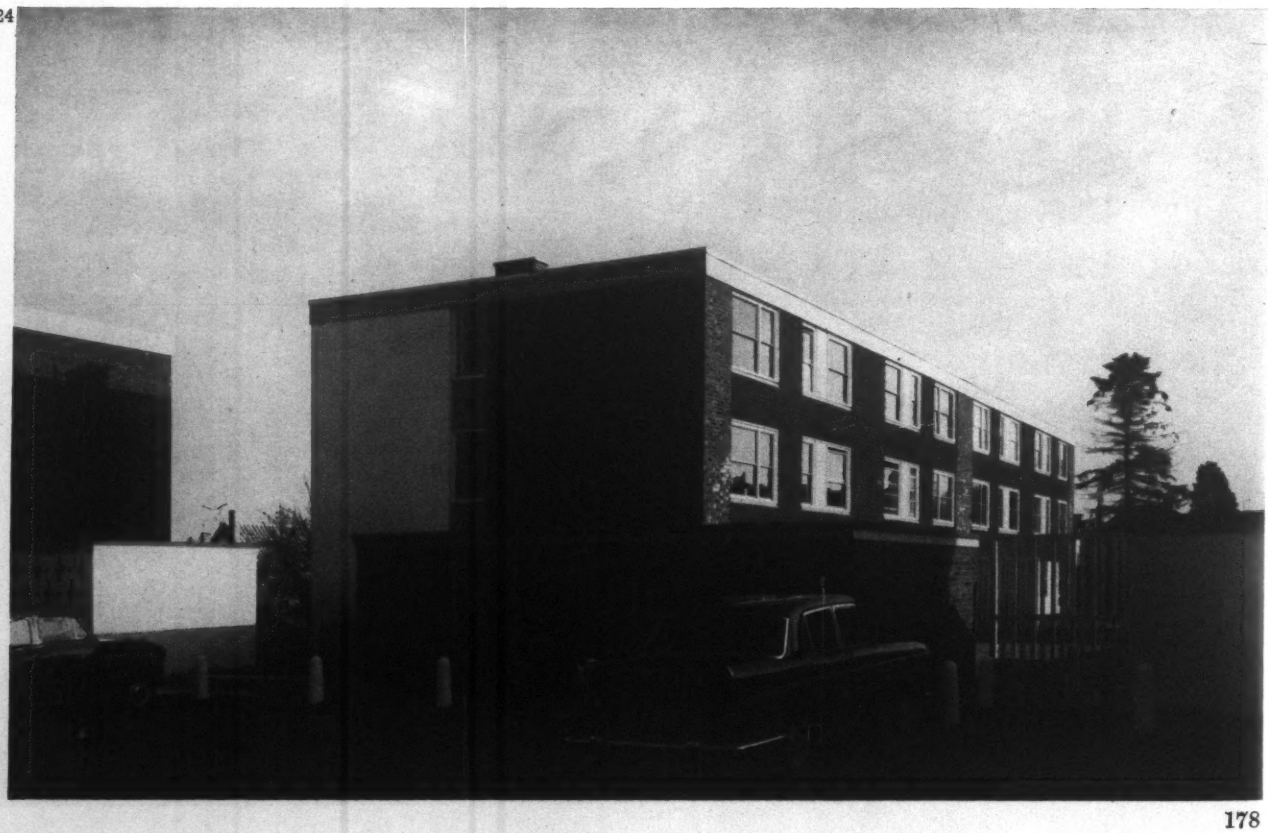


plan of typical flat

23, the entrance side of one of the blocks, with kitchen and bathroom windows.
24 (below), the garden side of another block, with living-room and bedroom windows, seen from beyond a block of garages.


23

24



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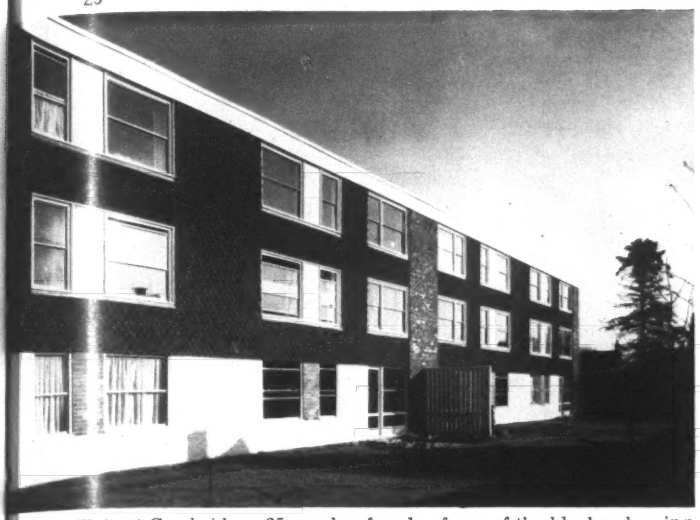


26

27

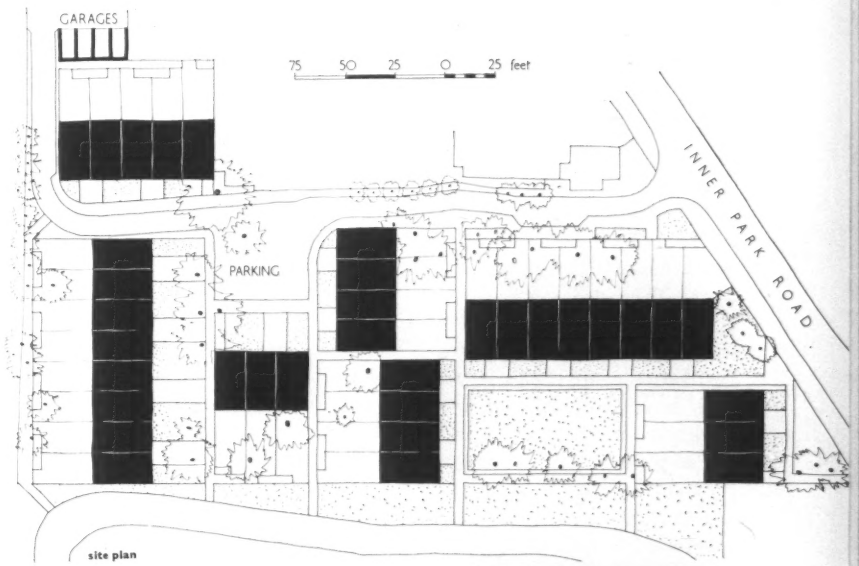
Flats at Cambridge: 25, garden façade of one of the blocks, showing tile-hung walling. 26 and 27, two views in the living-room of a typical flat.

HOUSES AT WIMBLEDON architects, Andrews, Emmerson and Sherlock

Thirty-two two-storey, three-bedroom houses, grouped in terraces of from three to eight, round a private close off Inner Park Road, Wimbledon Common, adjoining the LCC's Ackroyden Estate. At the far end of the close are 18 garages in three blocks. The terraces enclose two squares, the square away from the approach road being turfed and containing a large beech-tree. Each house has a 15ft. frontage, with the staircase placed across the plan, leaving the whole of the rear for a large living-room. There is no separate dining-room.

Construction is load-bearing brick cross-walls, with timber first floor and roof but reinforced concrete tie- and edge-beams at ground, first-floor and roof levels. Infill panels are timber, with horizontal weather-boarding, creosoted. Window joinery is oiled Columbian pine and the fascias are the only external painted elements. Ground floor rooms have electric under-floor heating.

Built for Inner Park Developments.



site plan

28

plans of typical house

28, the entrance side of two terraces at right-angles: kitchen window alongside the front door; main bedroom window above.

29

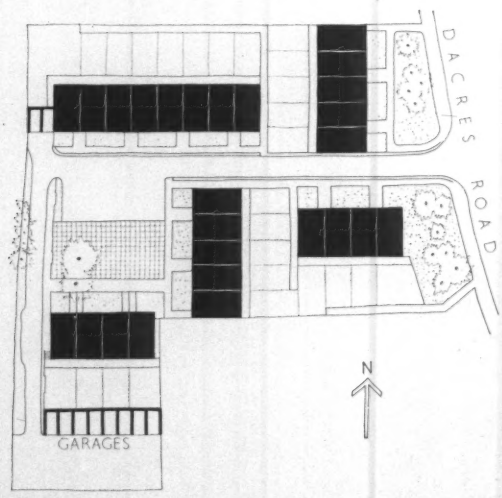
HOUSES AT FOREST HILL architects, Andrews, Emmerson and Sherlock

Twenty-six two-storey, three-bedroom houses, arranged in five short terraces—typical terrace illustrated—off Dacres Road. There are eight garages in a separate block. The site was originally the garden of a single house. At its far end is a railway, which has been screened by a 7ft. wall. Each house has a 15ft. frontage. The large combined living- and dining-room is at the back with full-width windows opening on to a small screened terrace and then on to the back garden. There are no separate front gardens.

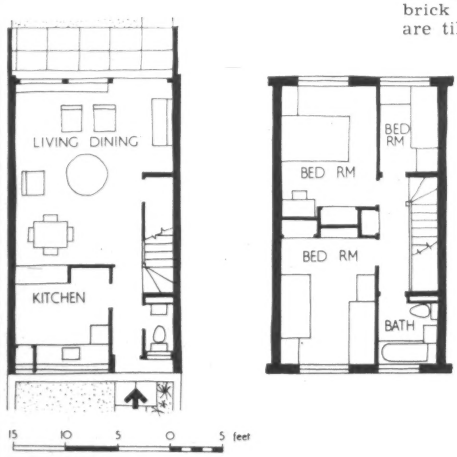
Construction is load-bearing brick cross-walls with a timber first floor spanning between them. Reinforced concrete tie- and edge-beams span between cross-walls at ground and first floor level, the latter supporting block partitions. Infill walls are timber framed below and insulating blocks above, faced with tile hanging. The timber roof is covered with asbestos cement slates. Ground floor rooms have electric under-floor heating.

Built for Walter Lilly and Co.

29, a typical block of four houses, facing on to a communal central garden. On the left is another block (of five houses) at right-angles, linked by a brick wall. The dark first-floor walls are tile-hung.



site plan



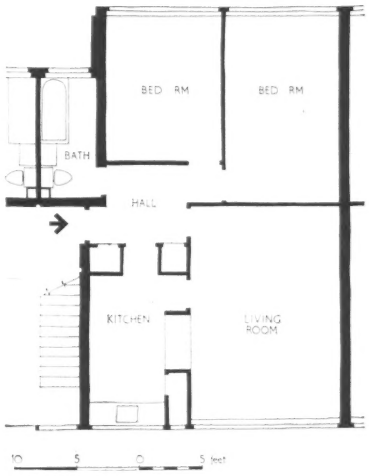
plans of a typical house

FLATS AT WANDSWORTH architects, Andrews, Emmerson and Sherlock

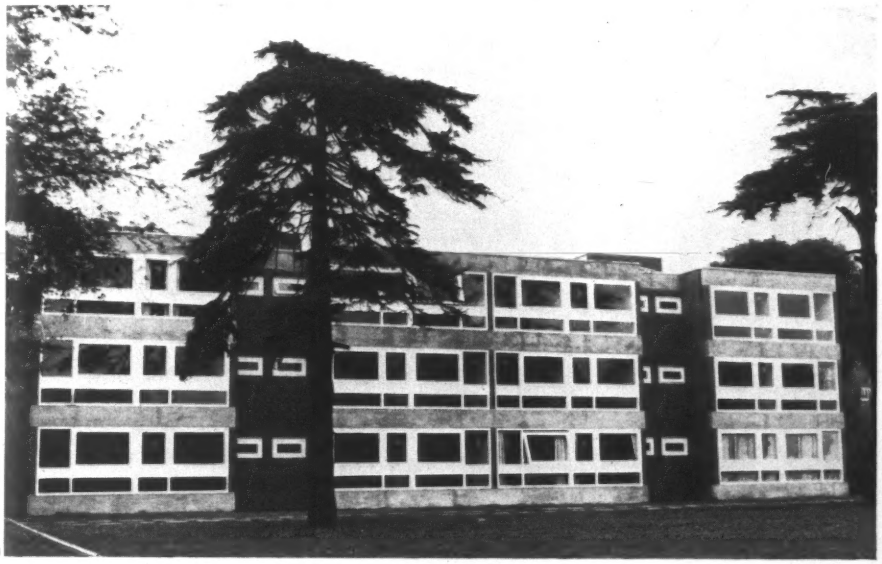
Twelve flats occupying a rectangular three-storey block, slightly recessed at the two entrances and staircases and more deeply recessed at the same points on the rear elevation, where the bathrooms occur. The site is at West Hill, between Wandsworth and Putney Heath. The block is placed across the frontage, with an access road passing the end and leading to a block of garages at the rear. Each flat has a 25ft. frontage and contains one living-room and two bedrooms. Because of the relative narrowness of the rooms, they have each been given wall-to-wall windows. The glazing is carried down to floor level but a heavy timber transom introduced to avoid a feeling of insecurity.

Construction is load-bearing brick cross-walls, with the concrete edge-beams treated as continuous deep spandrels and left exposed.

Built for the Francis Group of Companies.



plan of typical flat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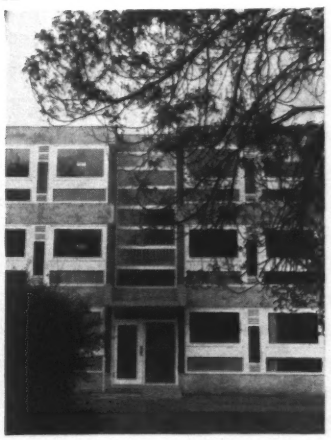
31

32



30, the block of flats from the rear. The recesses opposite the entrance contain the bathroom windows.
31, the entrance front, with recessed staircase window over the hooded door. Note the wall-to-wall living-room windows.
32 (above) one of the entrances.

MILAN

townscape

One of the most interesting exhibits at last year's Milan Triennale (AR, November, 1960) was a study in urban renewal by four young Milanese architects: Francesco Gnecchi-Ruscone, Piero Monti, Carlo Santi and Silvano Tintori. They had taken a quarter of their own city—an old quarter already undergoing changes but which could benefit greatly by the changes being planned with an eye to the desirable end-result—and had made it the basis of an exercise in creative rather than destructive redevelopment.

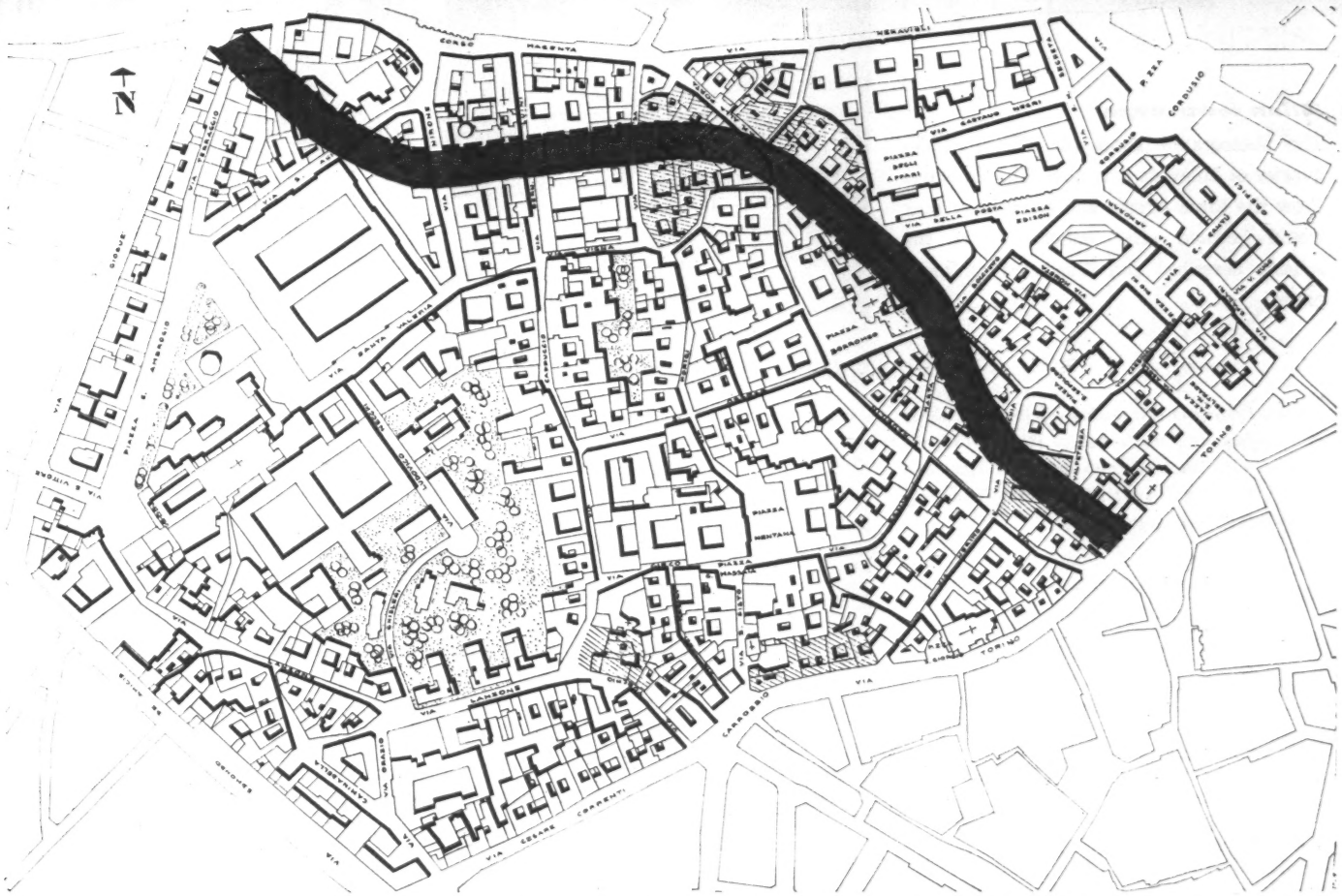
It was a central area—that of the *Cinque Vie*—with a well established character and containing a number of ancient monuments, most notably the church of S. Ambrogio; also the Catholic University. There was therefore the need for much to be preserved at the same time as it was changed and modernized. Somewhat decayed central areas of this kind are typical of many cities, and the project of these Milanese architects is illustrated here because the ideas they have put into it apply far beyond Milan. They show that preservation of what is good and still valid in an old quarter need not sterilize it and can be combined with replanning it to suit modern city life; indeed that with skill and imagination what is best in the old can be exploited to provide something eminently suited to modern needs, witness in this project the re-creation in new terms of the traditional courtyard type of planning.

The photographs on the right show the destructive intrusion of modern traffic into this area. These and the other photographs illustrating the area as it now is are by Farabola; the sketches illustrating the four architects' proposals for it are by one of their number, Silvano Tintori, and Maurizio Calvazara.

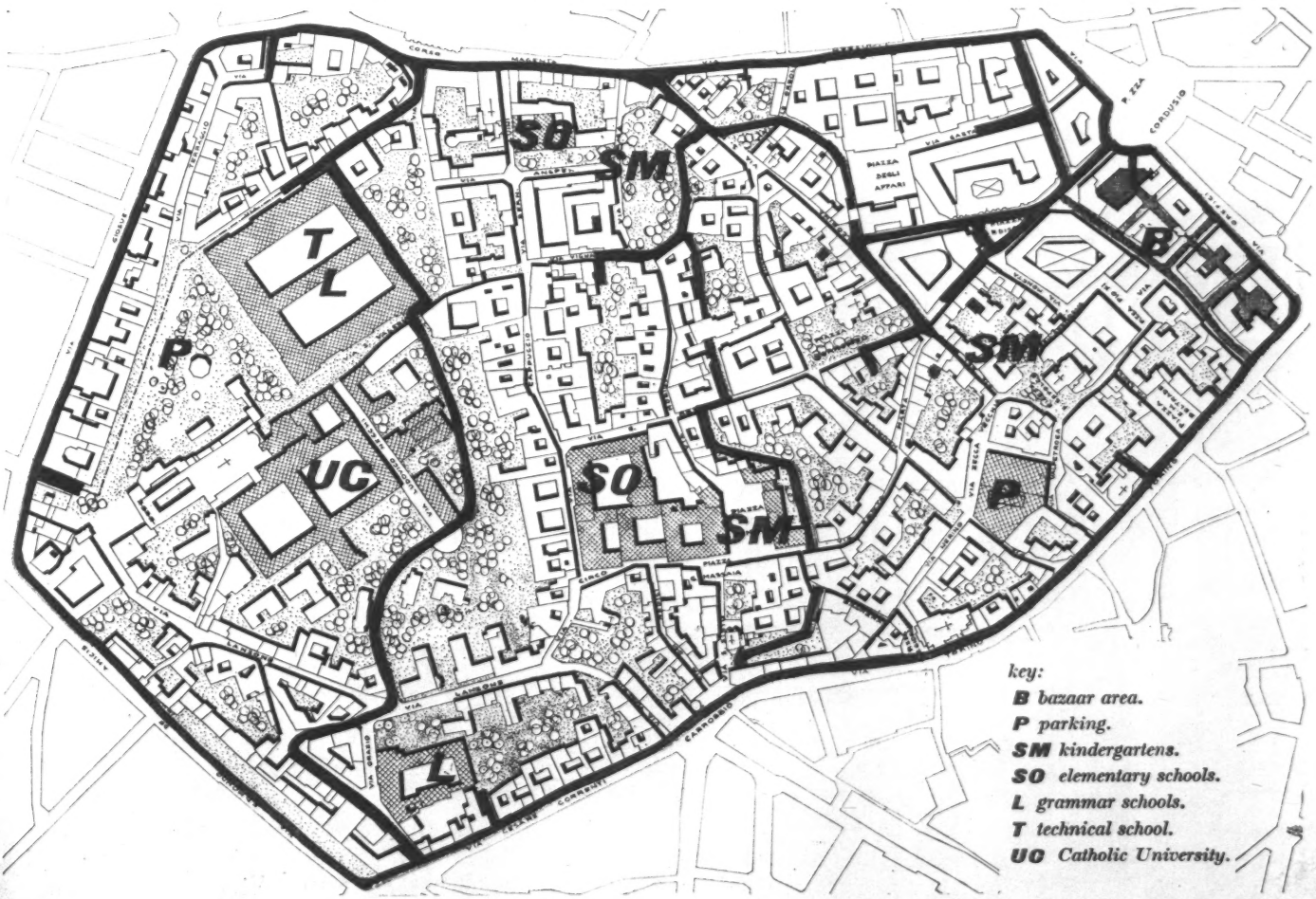
The area is near the central part of Milan; inside the ring of the now covered canals that were the medieval boundary of the city. It lies south-west of the Piazza del Duomo. It was chosen because, it is still recognizable as a unit, it is well defined by the roads around it, it is of a convenient size (about 10,000 inhabitants) for the reorganization of its community life, and it has remained largely residential.

The street pattern, though based on the original Roman layout, is typically medieval, but the area's residential character was defined in the eighteenth and the early nineteenth centuries. This produced a certain architectural uniformity;

[*continued on page* 187



The plan above shows the Cinque Vie *area as it is now; the road in brown is the proposed underground by-pass. The plan below shows the suggestions described in this article; the brown streets are the only ones open to motor traffic.*

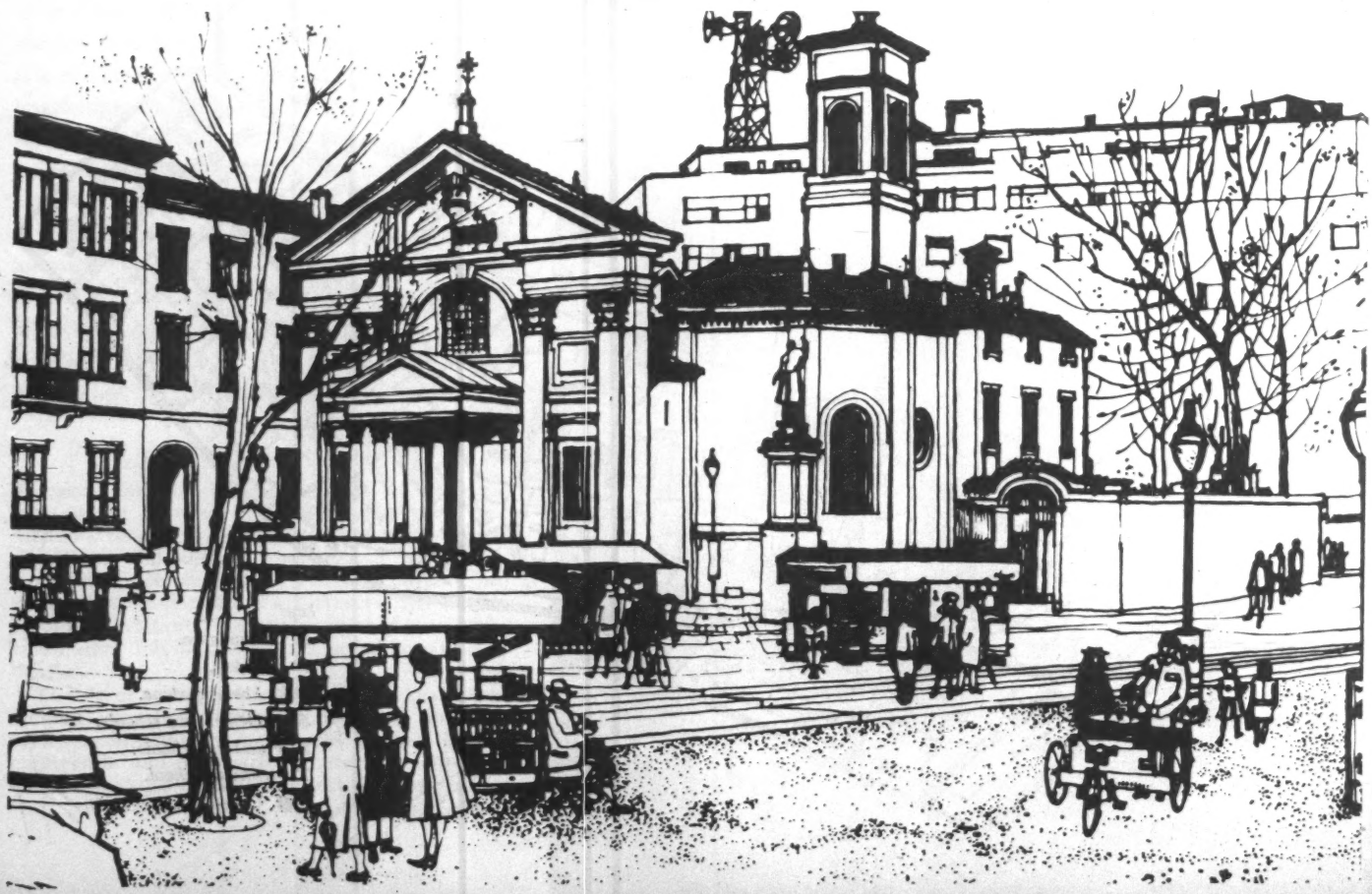


Milan townscape

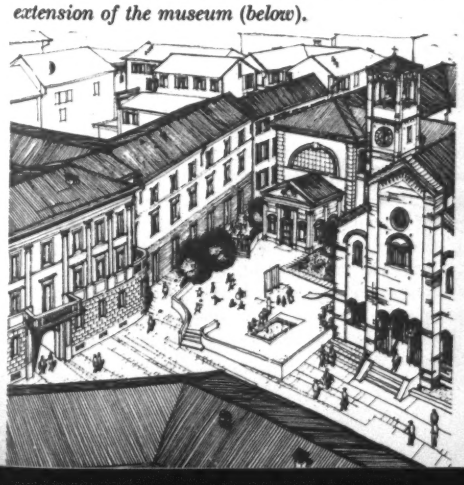
The photographs show the *Cinque Vie* quarter of Milan as it is now. The drawings show the same streets and squares as they would become after completion of the scheme described and illustrated on these pages.

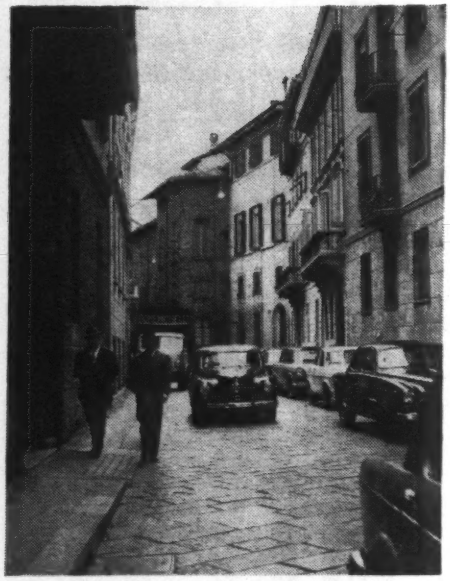
Pleasant gardens are walled off from the noise and confusion of traffic (above right). With the traffic removed the wall is no longer necessary and the view of the garden will again become a source of common enjoyment (far right).

The buildings which surround the Piazza Borromeo (right) are practically unspoilt, except for the pre-war offices that loom up behind the church, but the Piazza itself has been turned into a car park—see also the picture on page 182. This scheme (below) would restore it to the city's life as a quiet communal area.



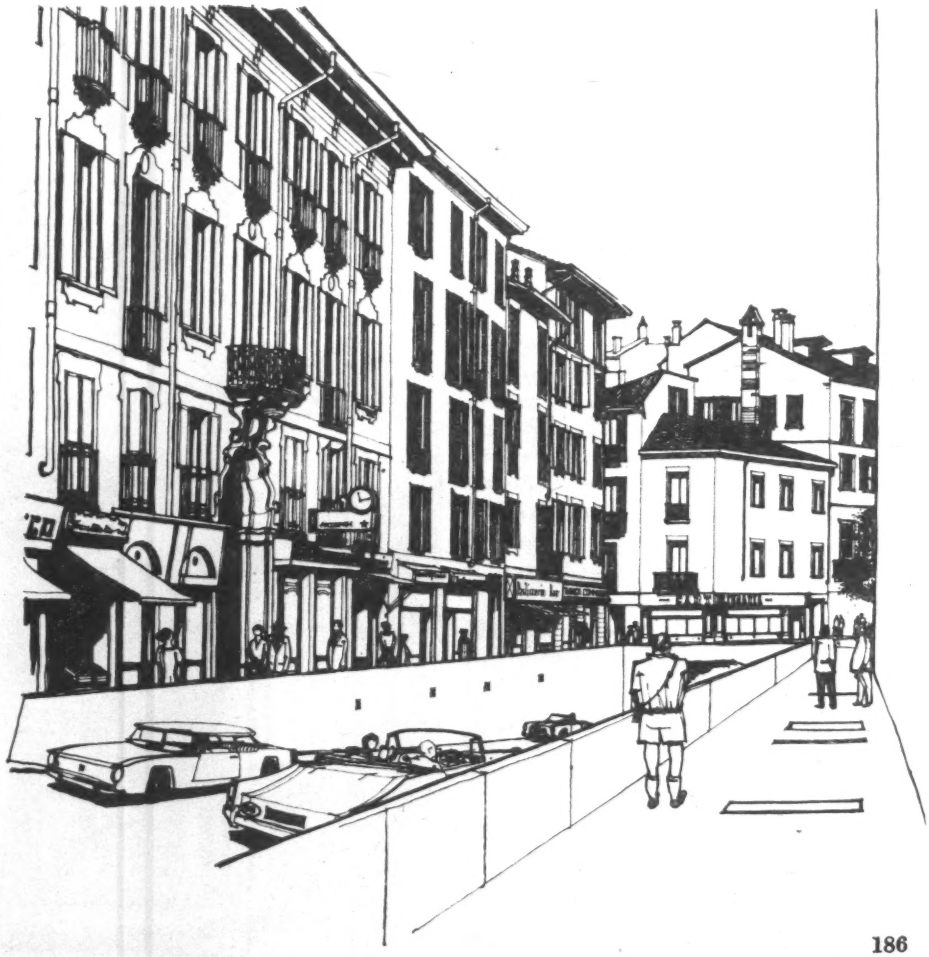
The Biblioteca Ambrosiana and the church of S. Sepolcro are cut off from the Piazza S. Sepolcro (right). Unnecessary railings shut off mean little 'gardens.' Once traffic is barred the gardens can be extended. One end of the Piazza can become a playground for an infants' school (above). The other end can become an open-air extension of the museum (below).





Via Cappuccio (above) is one of the best-preserved neighbourhoods and is lined with palaces still used until very recently by the families of the original owners. By restoring the streets to the pedestrians (right) the buildings can regain their dignity and scale.

Above, Via Boccetto as it is now. Right, from the same viewpoint, showing the ramp down to the proposed underground by-pass.



continued from page 182]

the medieval monuments were assimilated and the result was harmonious in spite of the differences between the individual elements. At the beginning of this century the building of banks, a stock-exchange, a post-office and several office buildings radically altered the north-east end of the area: their incongruity is more obvious where the street layout has also been changed.

In 1934 a wide by-pass cutting right through this area was proposed, in the mistaken belief that it would relieve the traffic congestion in the centre of the city. Another plan, made in 1948, maintained this project in spite of its obvious inconsistency with one of the plan's main aims: the decentralization of all new business activities towards the new *Centro Direzionale* located near the Central Station. This by-pass would not only have meant the destruction of a valuable historical environment, but would also have encouraged the construction of new high-density office blocks all along it, and would therefore have attracted far more traffic than it could carry. Luckily a committee appointed in 1959 to revise the 1948 plan recognized this danger and suggested that the by-pass should go underground. The project illustrated here has been developed on the assumption that this will be done.

The authors were convinced that residence must be maintained in the old central areas of big cities; in this specific instance their conviction is strengthened by the need to preserve both monuments and environment, by the need for a better distribution of functions within the whole city and by the possibility offered of reorganizing a residential community. They were then faced by three main problems: how to establish adequate residential standards both in the individual houses and in the neighbourhood as a whole by clearing, restoring and re-equipping the buildings; how to restore the streets as much as possible to pedestrian circulation and consequently create a network of service roads, parking facilities, etc.; how to replan the services of a community deeply integrated in the city.

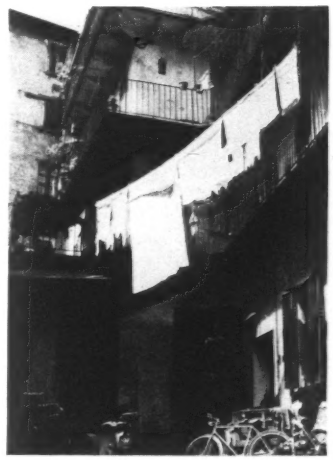
Acceptable or even high residential standards had been preserved in the area around S. Ambrogio and Via Cappuccio, where the old houses are often still inhabited by the families of the original owners. These have retained their pleasant gardens and have been kept in good repair. Between this area and the banks the old urban structure, consisting of houses surrounding a courtyard between street and garden, has been considerably altered with time. New buildings have filled up the inner areas, which once were orchards or gardens, and more storeys have been added round the courtyards whose proportions have thus been worsened. Population and density have increased and small artisan and commercial activities have taken over the lower floors. This process set in motion a mechanism of decay and depreciation that can only be stopped or reversed by a careful plan of demolition aimed at the establishment of satisfactory hygienic conditions, and such partial demolition forms part of the rehabilitation project.

The new spaces obtained by this demolition will also allow the reorganization of such commercial activities as can be allowed to remain. These spaces must, however, be specially designed for their new purposes, with different levels and pavings, with suitable planting, seats, lighting, etc., to define the areas allocated to different functions and reserve adequate areas for children's play. The proposed restoration of the courtyard system will also ensure a proper urban residential scale.

The reorganization of circulation also proposed is based essentially on the re-established residential character of the area. It is not only aimed at solving traffic problems but also at providing the spaces necessary for the outdoor life of the community and an environment capable of enhancing the architectural quality of the buildings. For this reason most of the streets are closed to vehicular traffic, and their pavements and furniture are redesigned for this new condition. All major traffic is kept out of the neighbourhood. It goes either round the perimeter or along the underground by-pass. Only two service motor-roads cross it, running mainly inside the residential blocks. These are entirely new roads, with no pedestrians, designed for slow motor-traffic and servicing all the parking and delivery spaces necessary to the life of the community. They will be designed in detail with the greatest attention and respect for existing architecture, they will find their way through the denser blocks without damage to valuable urban structures, they will go in and out of existing gateways or dip underground or sink beside the gardens deep enough to hide the silhouettes of moving cars. All the blocks will be connected to these motor-roads; new parking space will be provided inside the blocks and private garages will be located on the ground floors.

Two large public garages are also provided; one multi-storey, part in and part out of the ground and only linked to the underground by-pass on the site between Via Valpetrosa and Via Zecca Vecchia; the other all underground, corresponding to the paved area of the Piazza S. Ambrogio. In this connection it should be borne in mind that if the residential character of the area is maintained it will not be faced with such an alarming increase in the number of cars as it has suffered hitherto.

The reorganization of public services implicit in this project requires further factual research. At this stage it is possible only to indicate a few major points, as follows. The presence of great office buildings, banks, post-office, stock-exchange, etc., must be realistically accepted; in future they will tend to congregate outside of this area. The group of streets between Via Orefici, Via Spadari and Via Armorari has a definite shopping-centre character of metropolitan rather than local interest; this must be appreciated and encouraged by opening the inside of the blocks to the shopping crowds, making it into a 'bazaar.' The reorganization of the educational services, apart from the Catholic University, for which the removal of traffic passing between its buildings will promote the formation of a sort of 'campus,' is basically envisaged along these lines: (1) Four kindergartens are located in the areas of Piazza Mentana, Via Lanzone, Via Gorani and Piazza S. Sepolcro, probably using the ground floors of existing buildings (thus achieving a continuity of environment with the home) and notably a building in the Piazza S. Sepolcro where the Piazza itself offers a wonderful setting for an open-air play-space, in the middle of the city and yet separated from it by a change of level. (2) Two primary schools could be built in the areas of Piazza Mentana and Via Gorani. (3) All higher schools, from technical to *liceo*, could be grouped in the neo-classic barracks of Piazza S. Ambrogio, with the exception of the existing Liceo Carducci which can remain where it is. This adaptation of barracks into schools will present some difficulties, but the authors consider it necessary as it will provide a reason to preserve this Milanese landmark and on the other hand the barrack building offers, with its parade courtyards, large open spaces otherwise impossible to find in central Milan.



ID
a monthly review of interior design

General Dental Council Headquarters

architects : Sir Hugh Casson, Neville Conder and Partners

associate in charge : Frank Shaw

The General Dental Council serves a function analogous to that of the General Medical Council and is situated in the heart of London's medical zone, in Wimpole Street.* It is responsible for the conduct and professional standards of dentistry in Britain, and one of the main functions of its headquarters building is to house regular working committees and the meetings of the Council proper and its disciplinary tribunal, both the latter requiring surroundings of suitable dignity.

The occupation of the site follows this functional programme — the block facing on to Wimpole Street (see plan opposite) houses offices, committee rooms and ancillary services ; the central part of the scheme contains the council chamber (which doubles as a court-room for the tribunal) and the block on the mews side contains a formal dining-room over garages. Communication between these three main functional divisions is by way of the upper and lower galleries, or concourses, that lie at the side of the council chamber.

1, seating in the council chamber. The front row of seats, upholstered in black hide, has a fixed desk and lighting before it—the alternative version for the other rows is seen in 4, opposite. All the fixed seating in the council chamber was purpose designed by Morton and Lupton.

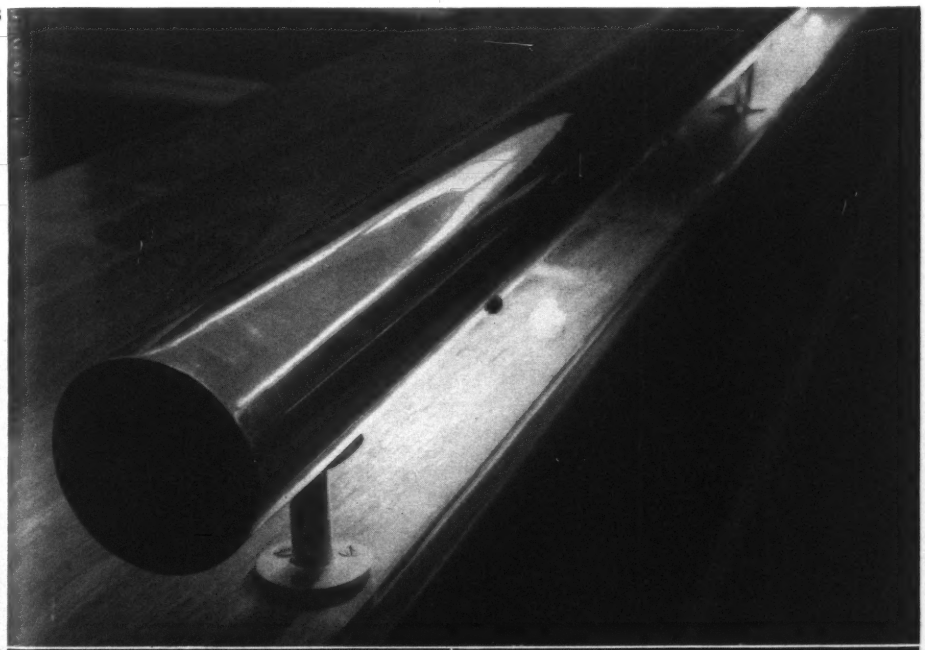
*The exterior of the building is discussed on page 207

2, general view of the council chamber from the public gallery. The walls are elm panelled, and the wall-hanging with the arms of the Council is by Gerald Holtom. The witness desk (see 3, over page) is in place, left of centre.
4, the lighting rail—concealed lamps in a large brass tube—on the desk of the front tier of seats. This detail solves a functional problem but also adds to the court-room atmosphere of the chamber.
4, fold-down desk, with concealed lighting, in second tier of seats.
5, the polygonal skylight over the central well of the chamber.

2

council chamber

3



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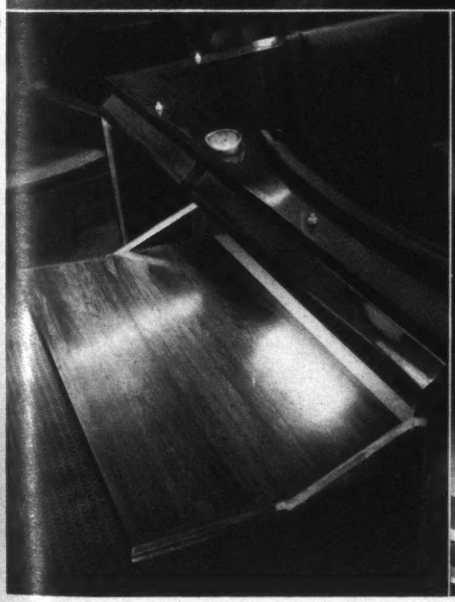

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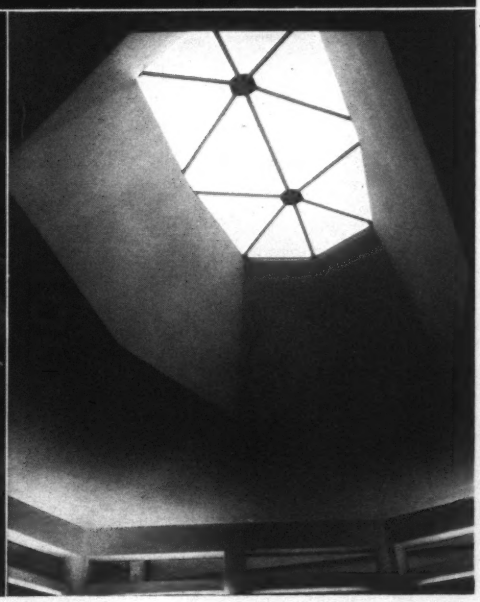
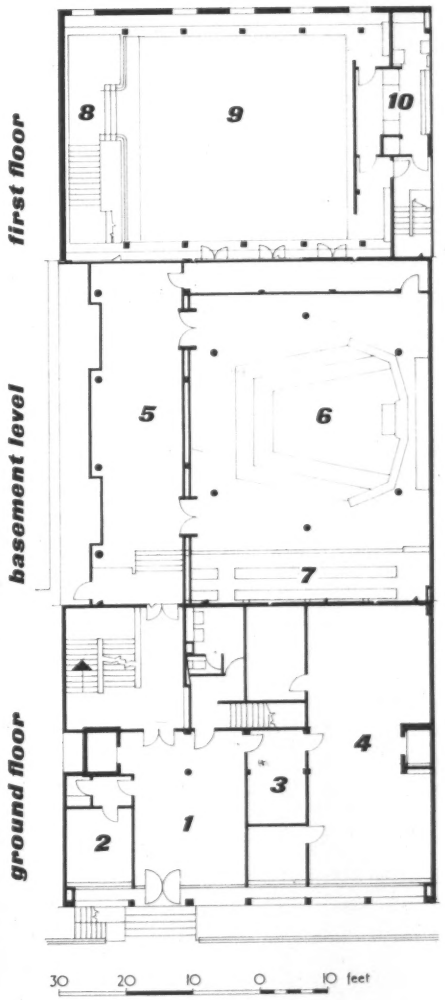
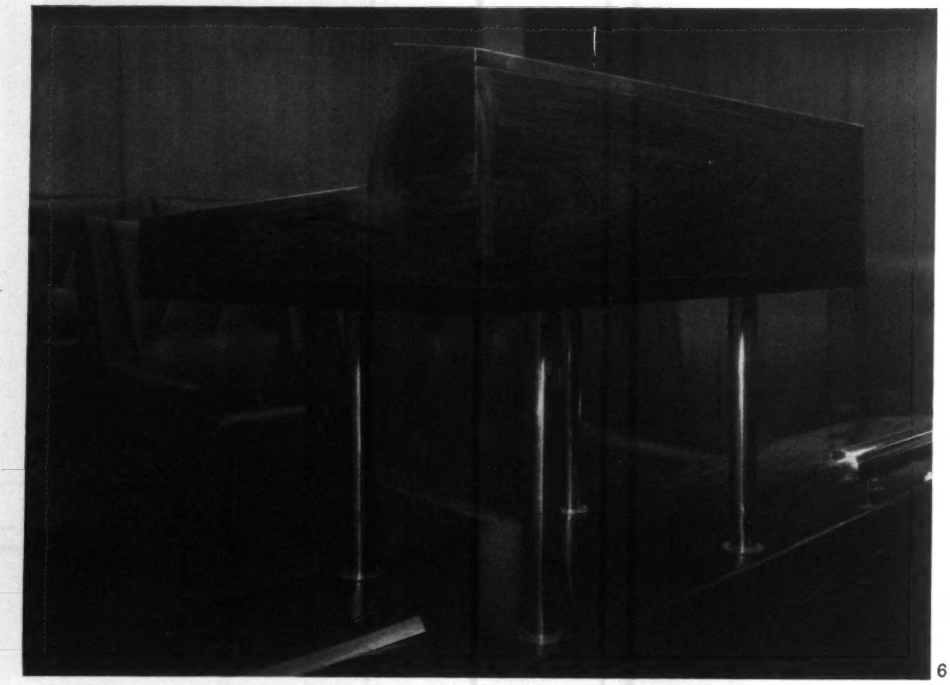




key
1, entrance hall from Wimpole Street
2, interview room
3, enquiries
4, registration office
5, ante-gallery at basement level
6, council chamber
7, public gallery
8, foyer and stairs to dining room
9, dining room
10, servery, kitchens below



6

council chamber

6, witness desk in the council chamber; supported on four brass legs fixed to a section of desk-top which can be dropped into place across the centre gangway in the front tier of seats. There is another desk for the accused, which rests directly on the desk in front of his seat. Both fittings may be removed when the tribunal is not sitting.

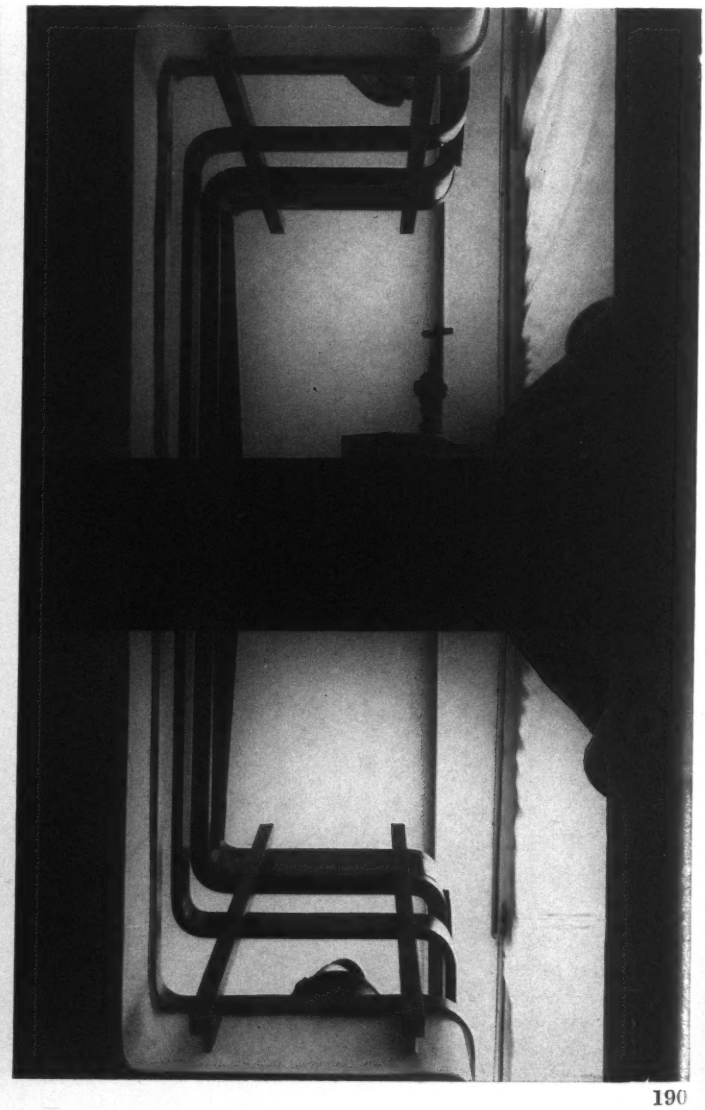
7, the upper concourse, connecting the office-block with the dining-room. The massive hardwood rail with black enamelled steel fittings protects the 'basement areas' which allow light from these windows to penetrate into the ante-gallery on the floor below (see 9).

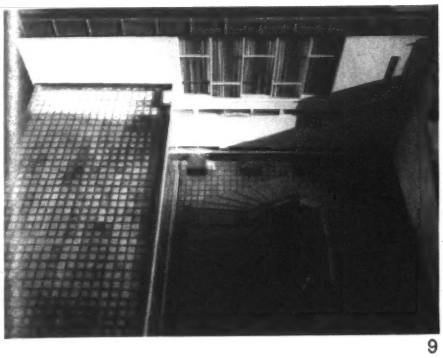
8, daylighting of the ante-gallery, outside the council chamber, from the windows of the concourse above (see 7).

concourse and foyer

7

8





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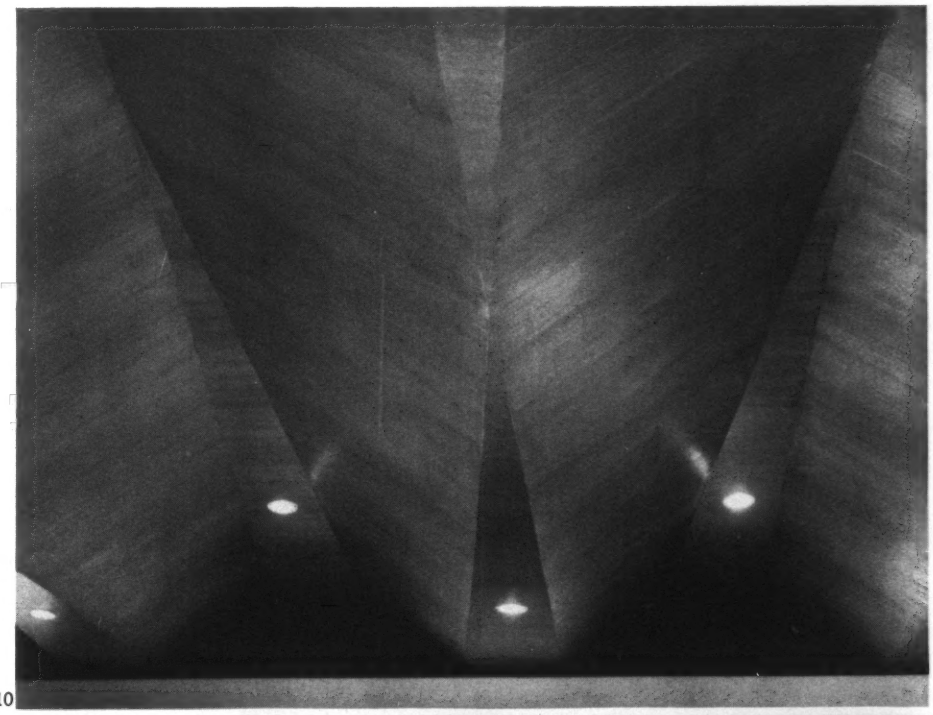


10

dining room

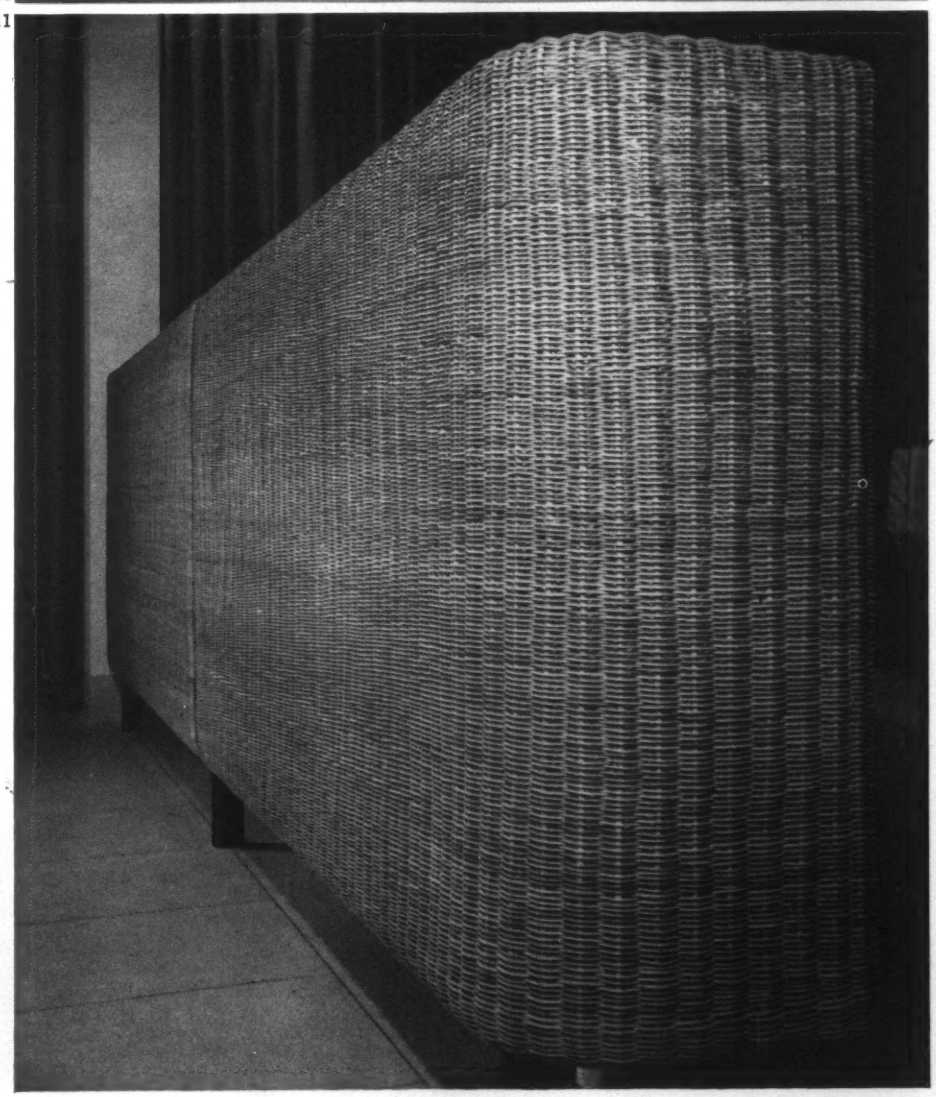
9, roofs of the upper concourse, left, and council chamber, right, with the courtyard windows of the dining-room beyond.

10, plywood beams carrying the roof of the dining-room, and forming the visible ceiling of chestnut veneer. The beams were built up off-site and hoisted into place with a crane, leaving only the triangular fillets between one beam and the next to be fitted into place on site.

11, wicker screen forming the balustrade between the main floor of the dining-room and the stair-well from the foyer below.

12, a general view of the dining-room ; the servery lies behind the high wicker screen at the far end of the room, the windows lie beyond the columns on either side, and only the area within the rows of columns is carpeted, the rest being in terrazzo, as in 11. The furniture in this room, like the bulk of the movable furniture throughout the building, is the client's choice and not the responsibility of the architects.

11



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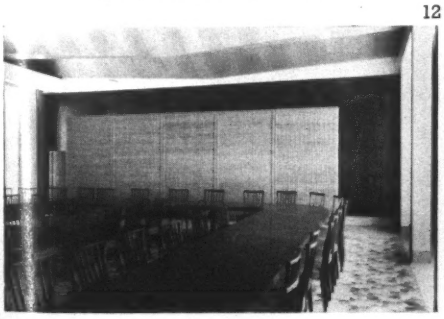
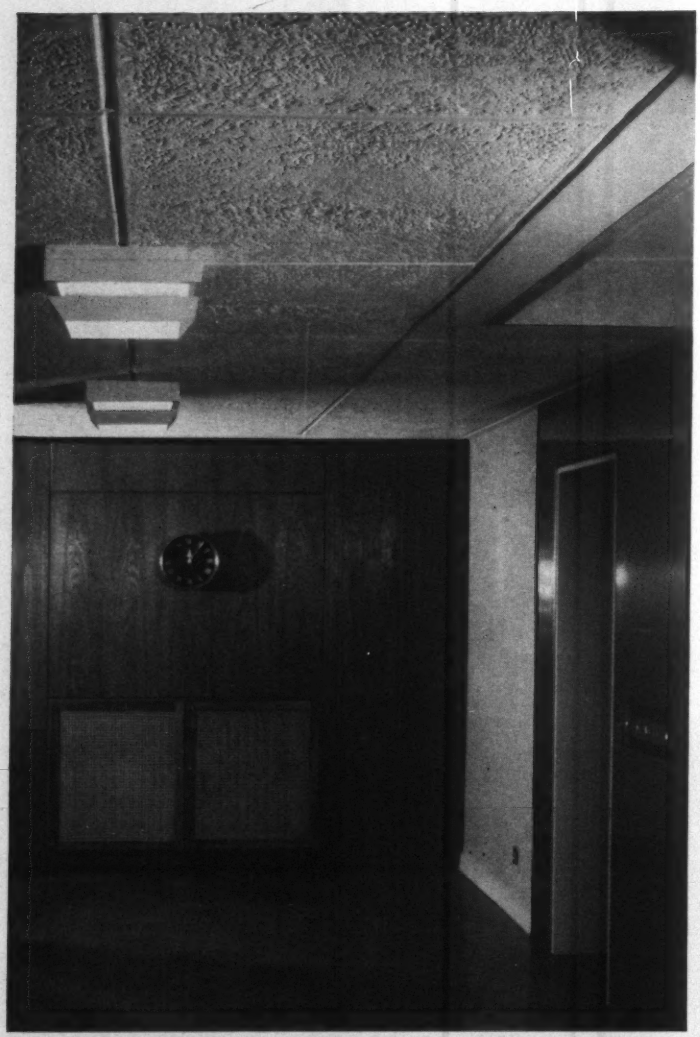


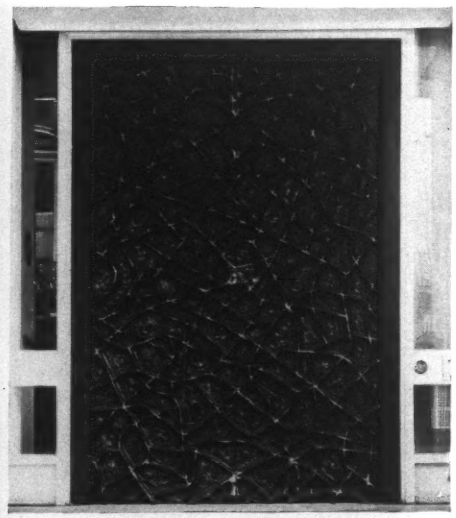


13

14

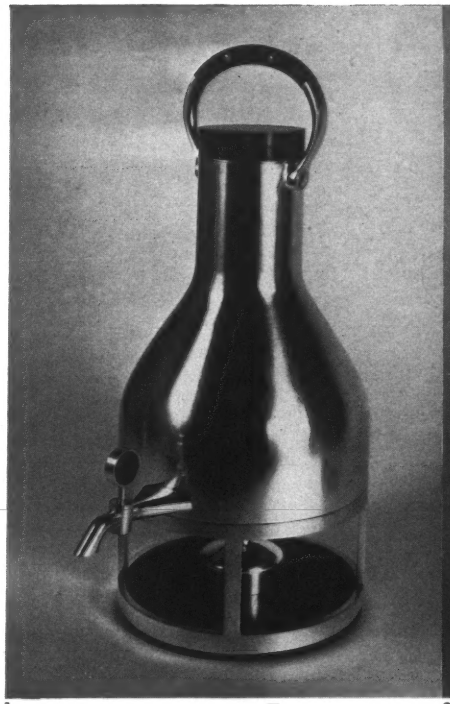
13, typical corridor detailing on an upper floor of the office block, with the entrance unit for the lift, set in a stainless steel surround, on the right.
14, detail, about one-quarter full size, of the random-ribbed surface of one of the cast aluminium outer doors of the entrance, designed by John McCarthy. These outer doors open into the glazed side of the entrance lobby—as seen in 16 below—in a similar manner to the security gates of the bank by the same architects illustrated in AR, September, 1960.
15, the outer doors seen closed, showing how the overall pattern of raised ribs makes a single unified surface, rather than two separate doors.
16, the entrance lobby seen from the hall, with the aluminium outer doors open.

office block

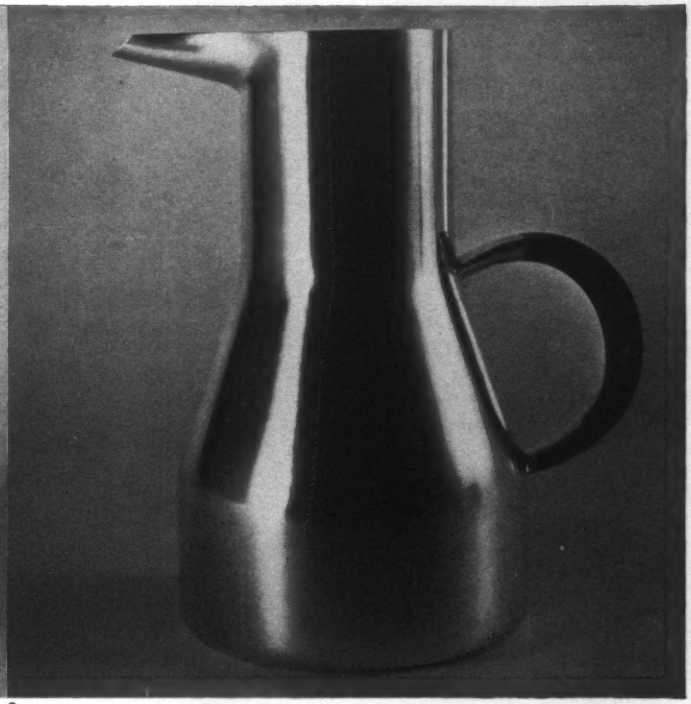


15

16



1



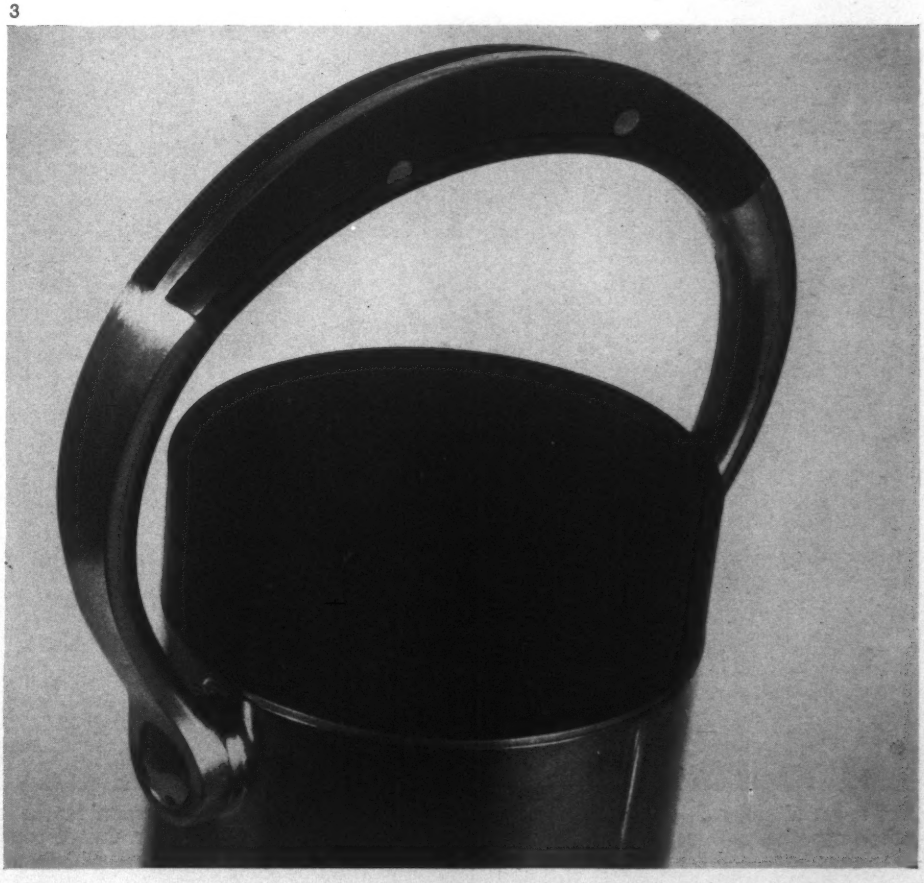
2

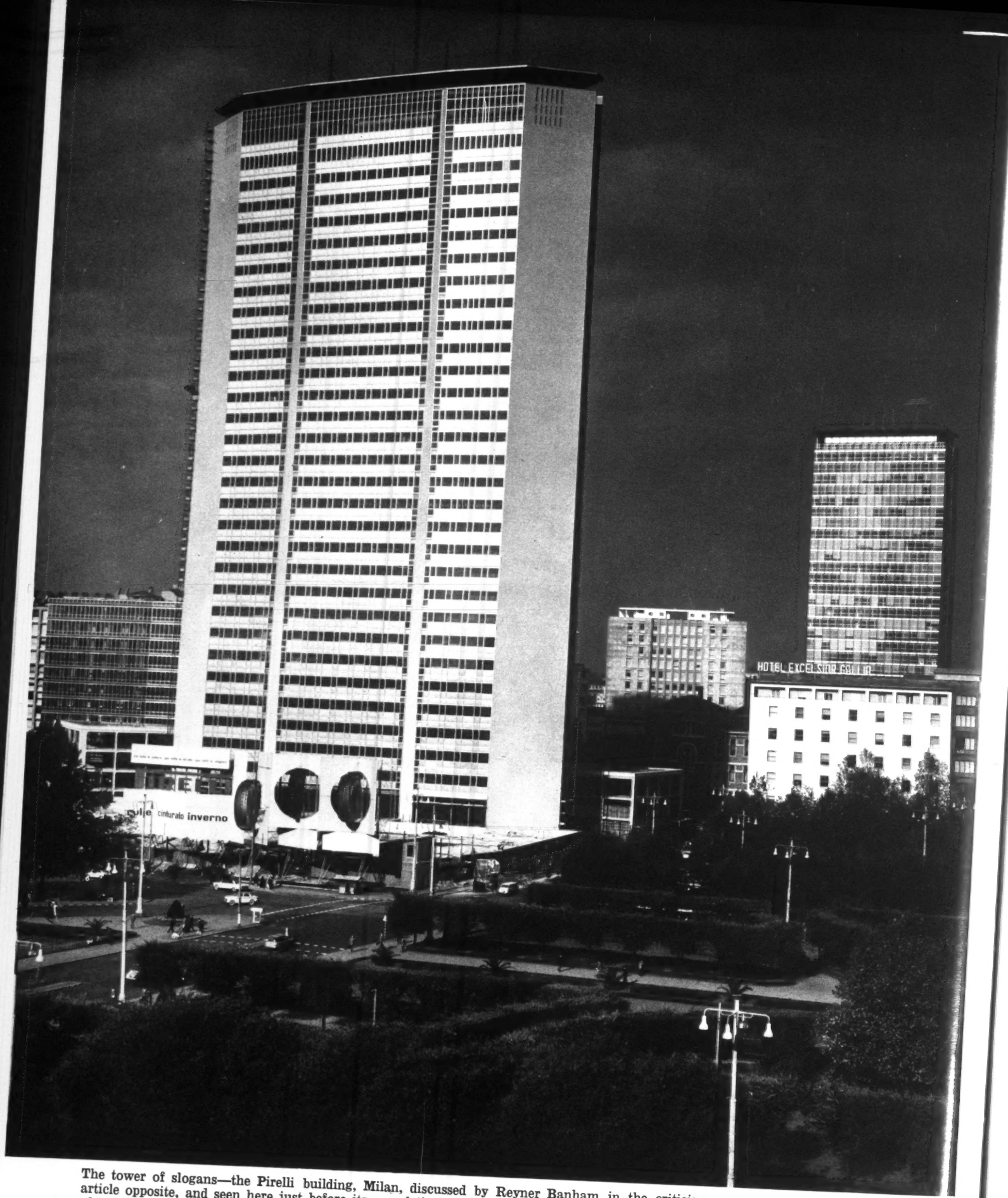
Churchill College plate

The designers of the equipment for Churchill College, if they are at all sensitive to the psychology of time and place, will find themselves faced with delicate problems, but as far as the ceremonial equipment is concerned, the prospect is promising. Churchillians will eat with, and off, tableware as well designed as that used on the s.s. Oriana—indeed, the same metalware as on the Oriana, designed by Robert Welch, who has also designed the implements of the coffee-ceremony, which are illustrated on this page, and were commissioned by Sir John Cockcroft.

***1,** coffee urn, in silver with rosewood handle, to hold one gallon.*
***2,** matching cream-jug. As will be seen from the detailing of the handle, this is shown to about twice the scale of the urn, and is about seven and a half inches high.*
***3,** the carrying handle of the urn. Detail views show that Robert Welch seems to have turned to an engineering idiom, rather than the silversmithing tradition for his forms—the method of mating rosewood and silver seen here is reminiscent (intentionally or otherwise) of the way a racing car's steering wheel is built up, and the over-all shapes of these vessels should have an elusively familiar look to scientist members of the College.*

3





The tower of slogans—the Pirelli building, Milan, discussed by Reyner Banham in the criticism article opposite, and seen here just before its completion—is the product of a unique combination of talents: Nervi and Danusso, engineers; Ponti-Fornaroli-Rosselli and Valtolina-dell'Orto, architects.

criticism

Reyner Banham

Pirelli Building Milan

Architects: Ponti, Nervi and associates

The Pirelli tower is certainly the most impressive, probably the best, building put up in Milan since the War. The visitor is seized by its quality the moment he steps out of the Central Station and sees it rising dramatically on the right-hand side of the Piazza Duca d'Aosta. The immediacy of his response stems partly from the inherent virtues of the building itself, but also from the way in which the whole architectural world has been prepared for Pirelli by a pre-release publicity campaign unequalled in extent and duration even by the brand-prestige skyscrapers of New York—readers of the AR will have seen the Pirelli building discussed or illustrated in February 1956, April 1957, July 1959 and January 1960, and the rest of the bibliography in other magazines and even non-specialist publications is equally massive. From first to last, Pirelli must be discussed as a piece of advertising architecture; the questions it raises, even in matters of function and structure, are nearly all questions about what advertising does to architecture, and how far architecture is a fit medium for advertising.

the heritage of Sinisgalli

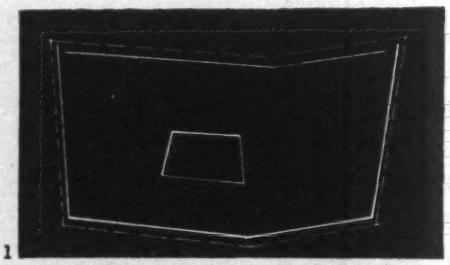
At the outset, then, it is necessary to bear firmly in mind that Italian advertising is not—or not yet—capable of being subsumed under the array of clichés by which we characterize the master-cliché 'Madison Avenue' (or even that quaint little neo-Georgian side turning off the Avenue that houses British advertising). In Italy, major advertising campaigns are more commonly set up by the producer himself than by any agency, and where an Italian industrial giant shows particular enterprise in its advertising, one can usually distinguish a house tradition stemming from the versatile hands of the poet-mathematician Leonardo Sinisgalli. He it was who first gave the characteristic physiognomy to Olivetti publicity, later he set Pirelli on a similar road, and recently he has tried to give style and status to the brand-image of the government sponsored *Finmeccanica* organization, though politics have beaten him in this instance.

To all these concerns he gave an advertising that is product-oriented, not market oriented, and the ability to use Italian *Buon Gusto* as a style of mass communication. Since the media with which to communicate with the masses are a bit hit-and-miss in Italy, the resultant advertising of a firm like Olivetti or Pirelli tends to be stylish, idiosyncratic, humorous, intuitive, disorganized, arty and unreliable by Anglo-Saxon standards, though probably quite as effective as ours. It is also capable of incorporating the work of fine artists and architects, without the self-consciousness and pomposity that accompanies such exercises with us. A situation that exists in the US almost for Charles Eames alone, is open in Italy to anyone who cares to participate, and it is on this footing that the Pirelli operation rests.

a four-headed design team

Even so, Pirelli must not be sentimentalized—its design is not, in any material particular, an exception to the rules of commercial architecture. The project was the work of a team as large as that responsible for American or German buildings of comparable size and consequence, and this team was formed by pooling the resources of four different offices: on the architectural side, Ponti-Fornaroli-Rosselli and Valtolina-dell'Orto, and on the structural side, Nervi and Danusso. Although Gio Ponti has been scrupulously careful to mete out due credit to all the collaborators, particularly less well-known ones like Giuseppe Valtolina and Egidio dell'Orto, this is a Ponti building as surely as the Seagram, with due regard to all the other collaborators, is a Mies building. Indeed, Ponti, with his international reputation as a front man for the craze for Italian design and his previous experience of 'representational' office blocks, such as the Montecatini, was a natural choice.

The design of the Pirelli building clearly exercised his mind for some time. Much of the hard thinking must have been done while he was assembling his notes for *Amate l'Architettura*, and references to the Pirelli problem abound throughout the



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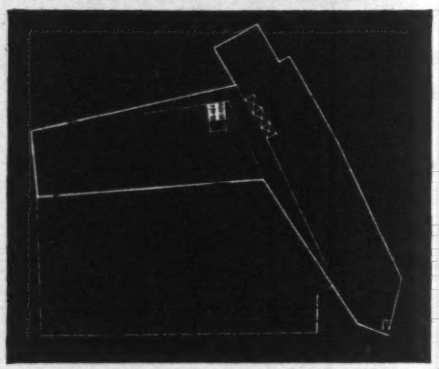

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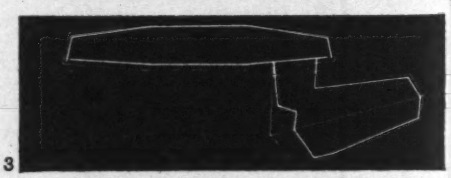

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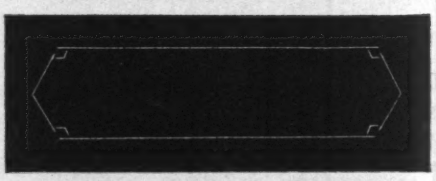

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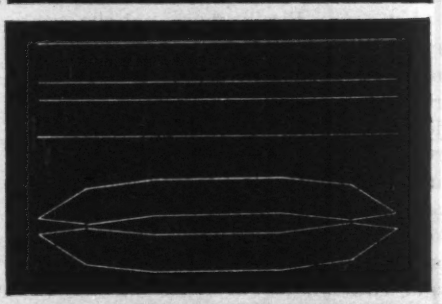

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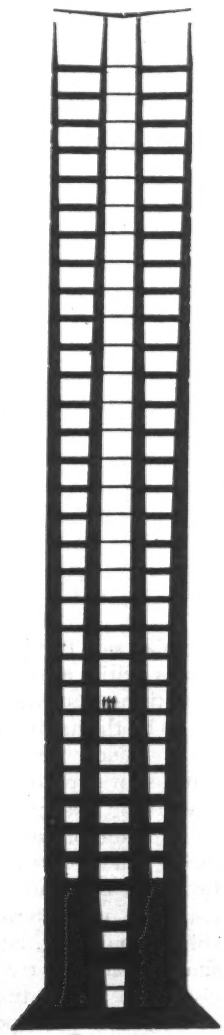
Gio Ponti's progress towards a 'forma finita' or closed form.
1, villa Planchart in Caracas —attempt to bring the extremities of the facade under control.
2, Italian centre in Sao Paolo —early attempt to resolve the end of a tall slab.
3, Fondazione Lerici, Stockholm—symmetrical double taper on main block.
4, Lancia Building, Turin —regular slab with corners, the last stage before
5, Pirelli—a double slab turned back on itself at the extremities.
6, 7, the 'slogans' of Pirelli, the double tapered floor-plan, supported by the service wedges at the ends and the double-bifurcated columns, 7, of Nervi's structure.
8, section through the podium of the Pirelli building.



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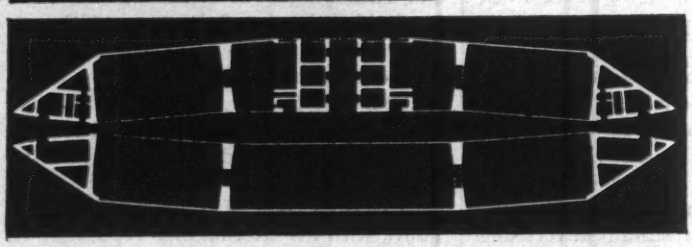

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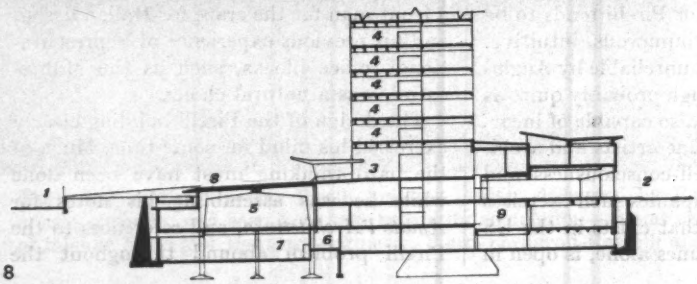

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key
1, Piazza Duca d'Aosta
2. via Filzi
3. entrance hall
4. office floors
5. auditorium
6. viewing gallery
7. plant rooms
8. parking on podium
9. underground service road

book. These references touch fundamental problems in the design, and thus make a good point of departure for a critical discussion.

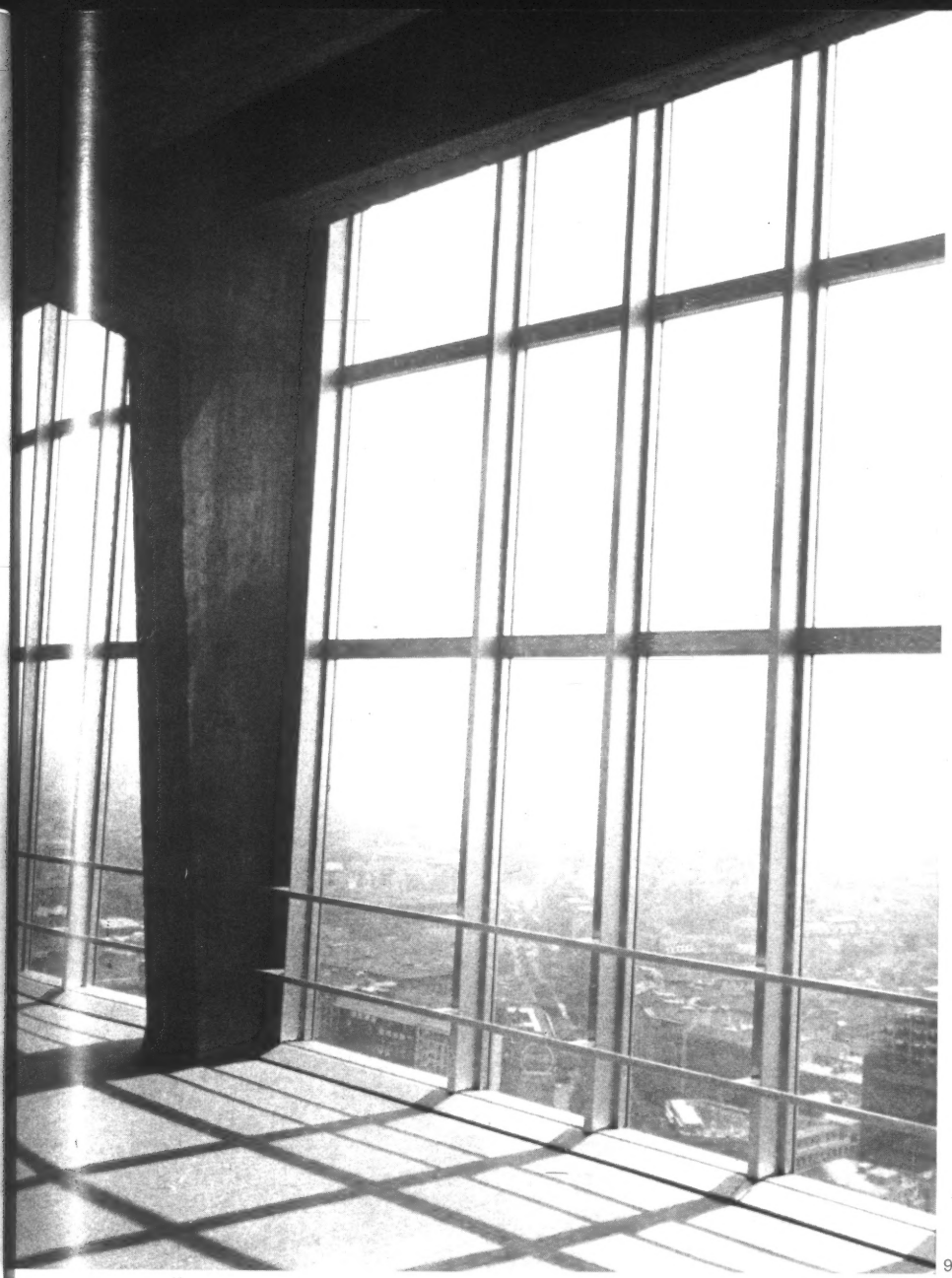
Ponti has insisted on more than one occasion that Pirelli is not a 'formalist' building. At one level this is true: it is not, e.g., Neoliberty, and there is no other recent Italian building in which the structure, planning module and external envelope are so consequentially related. As far as one can judge, the Pirelli building need concede the palm to no other recent Italian work on grounds of function, organization, mechanics, services or maintenance.

ponti and the 'closed form'

Nevertheless, it is clear from *Amate l'Architettura* and related publications such as the article in *Domus* (March 1956), that fundamental formal decisions must have been taken before mechanical and functional design—except, possibly, the elaboration of the office-module—had even begun. Pirelli is revealed as the end-product of a series of formal exercises, embodied in buildings so functionally and structurally diverse that there can be only formal connections between them, the object of the exercises being the evolution of a 'forma finita,' a closed form. The desire to evolve such a form may or not be a piece of classicist's squeamishness in the face of the so-called 'endless' architecture of the (equally classicist) Miesian school, but the mode of attaining it is by no means obviously derived from classicising design-techniques.

It is of the nature of Miesian endless architecture that walls on opposite faces of the building can be produced to infinity without meeting. It is of the nature of the Pirelli tower that its front and back walls would meet well within the city boundaries. Having established this fact, Ponti then increases the convergence of the outermost panels of each wall so that they would meet well within the limits of the site. But the form is not closed by their physical convergence; the front and back walls do not meet and are separated by an air-gap that splits either end of the building from top to bottom.

This brings up a curious point in practical aesthetics. The classic demonstrations of Miesian endlessness hinge on the fact that adjoining walls do not visually intercept one another, but are separated by a double re-entrant and only their imaginary projections intercept in the process of continuing to infinity. In the Pirelli building the non-interception of walls is taken to indicate that where their imaginary projections meet, they stop and continue no further. On the optical evidence, the Miesian proposition (never made by Mies himself, of course) is erroneous—the mass



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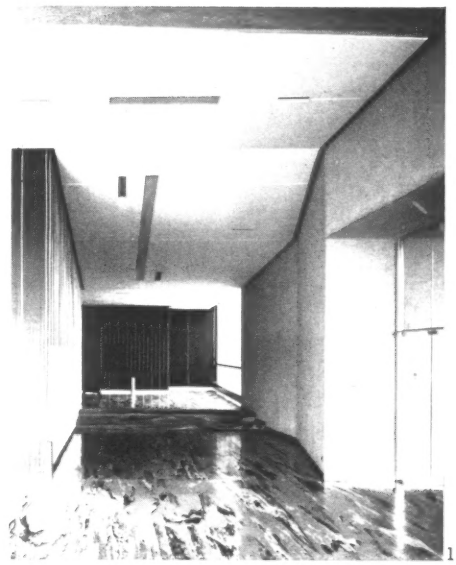

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The public spaces of the Pirelli building:
9, two-storey windows of the attic under the roof, looking out over Milan – ultimately this superb room may be entirely occupied by service machinery.
10, the auditorium (cantilevered projection booth at left) buried in the podium (see 8, opposite) with stairs to street in foreground.
11, view through the entrance hall: the undulating wall on the left is one of the few points where the form of the structure is allowed to appear inside.
12, an office: although the form of the windows reveals that the wall on the left is part of the structure, the shape of the columns is concealed.
13, the theatre of the services: the basement gallery commanding a view of the plant room through the windows on the left.

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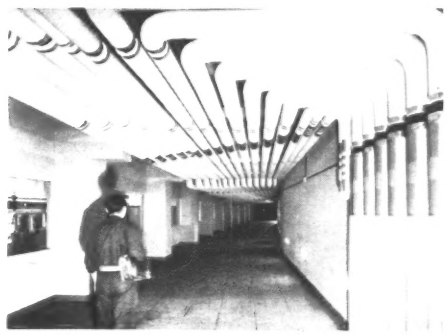

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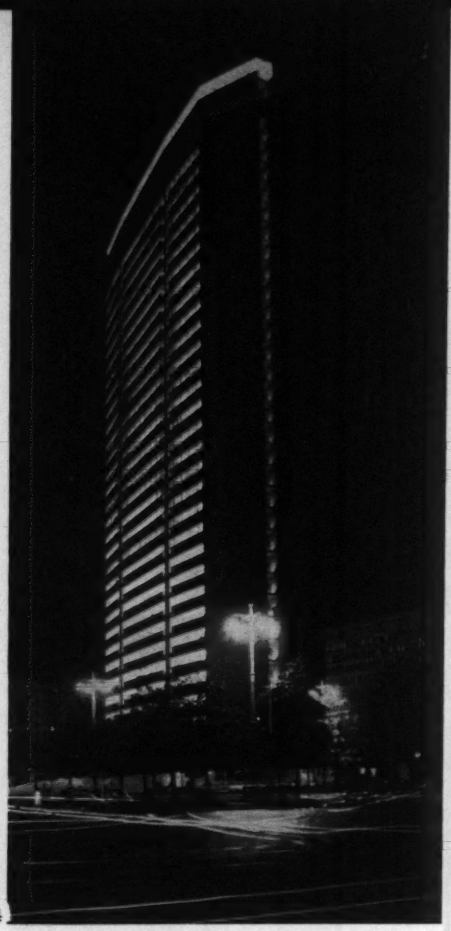

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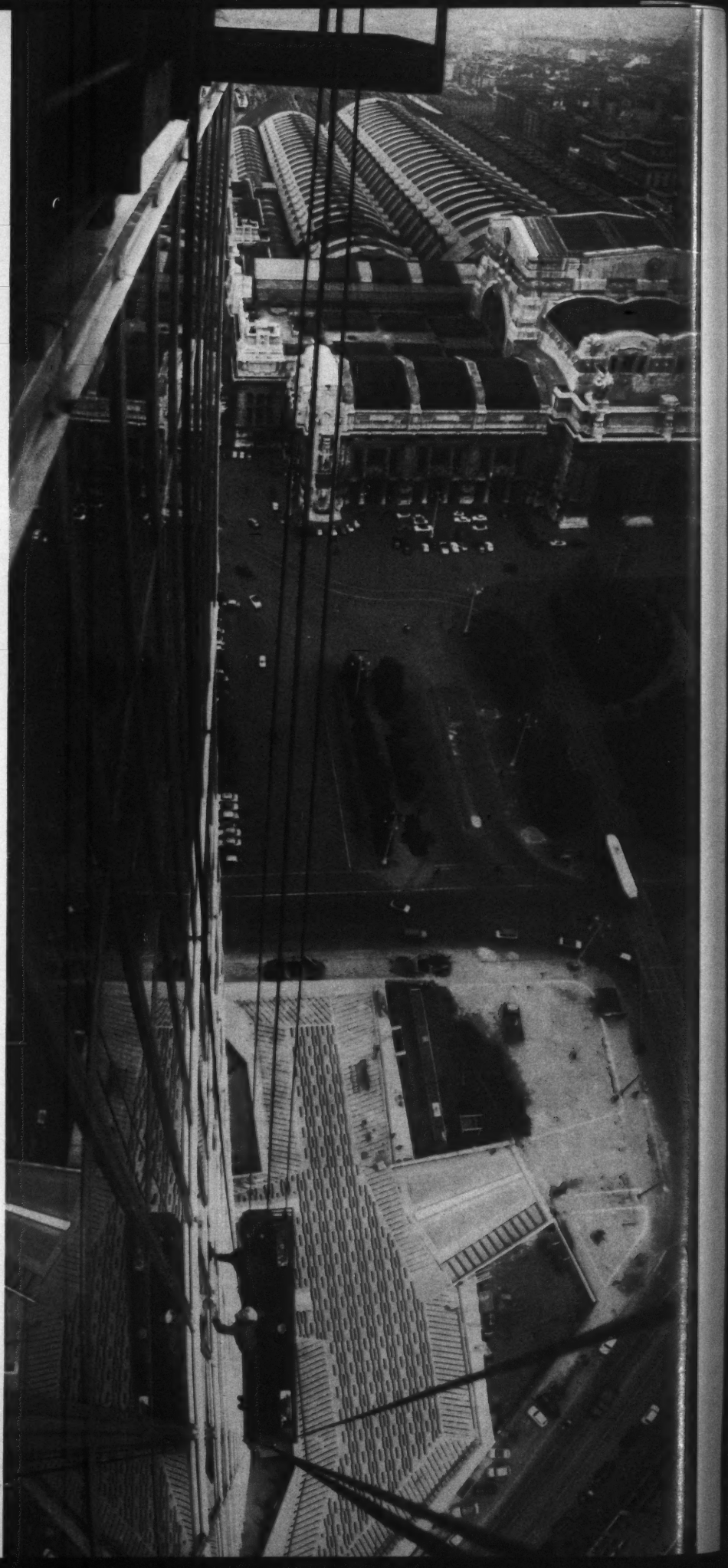
External aspects of Pirelli:
14, night view of the tower; the lights emphasize the split ends and the 'floating' roof-slab.
15, the split-ended form of the main tower contrasted with the ancillary building at the back.

15

16, view down the Via Pirelli, showing the smaller blocks in the Quartiere Direzionale, and the subsidiary blocks of the Pirelli tower in the foreground.
17, view down into the piazza Duca d'Aosta from the roof of the Pirelli tower. The projecting toe of the podium is more or less solid structure as far as the foot of the access ramp, and thus severely limits any radical improvements in traffic circulation that may be needed in the future.

16



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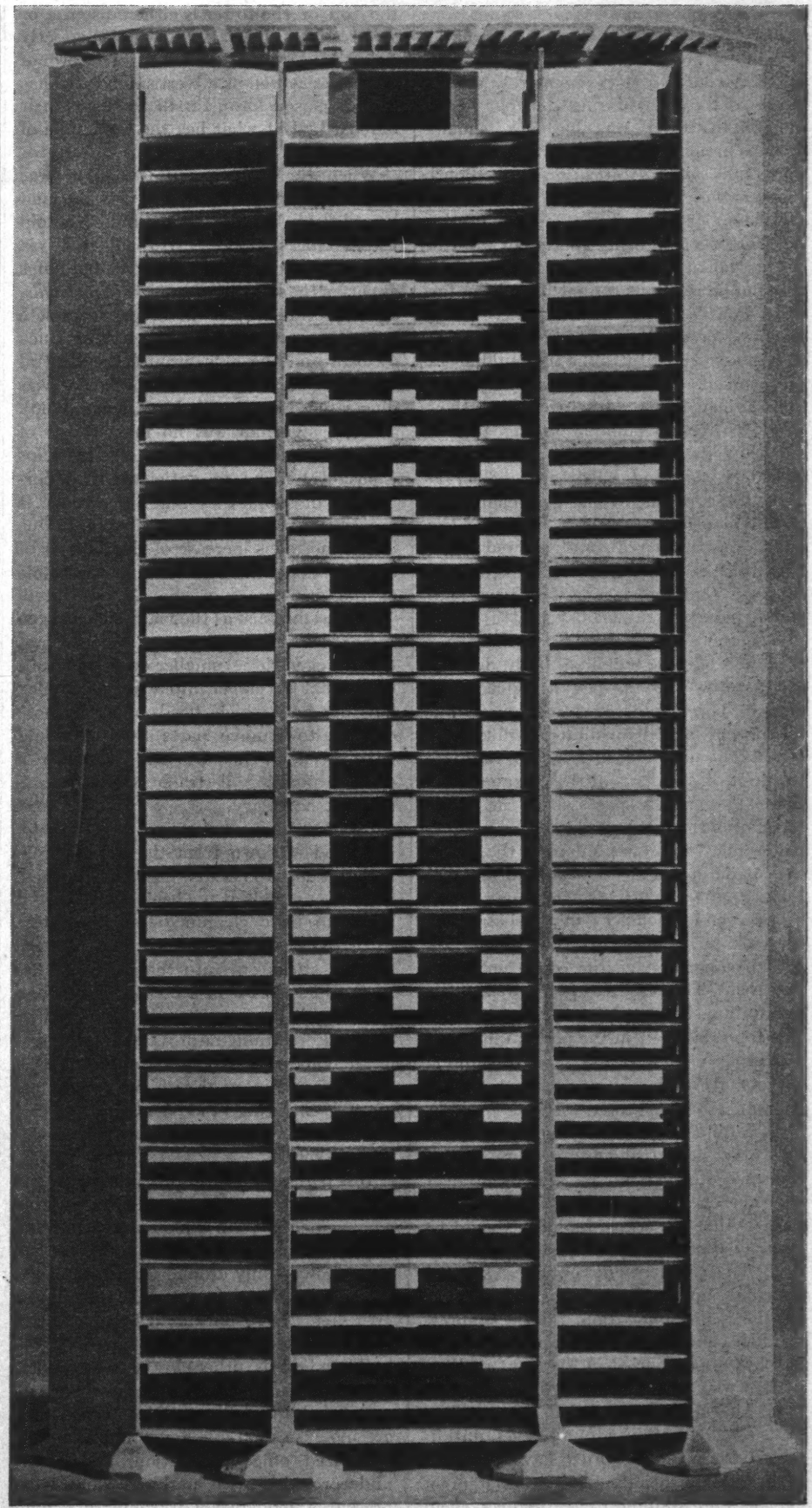
of black painted steel exposed in the process of creating the double re-entrant makes a corner-stop to the walls as positive as that created by a double-pilaster turn in Renaissance architecture. The Pirelli device makes an equally emphatic stop, without this thick black line, and the method by which it does this can be most easily seen by examining the other air-gap, that under the roof. The main façades of Pirelli run vertically through thirty-two uninterrupted storeys, as the eye reads them, and then stop. The implication of endlessness would be overpowering were it not that one storey further on, a roof-slab is imposed, visually distinguished from the façade by the air-gap. The effect is like a ruled line closing a column of figures, disparate and conclusive. Now, rotating this effect through ninety degrees, one sees that it works in a similar way for the vertical air-gaps in the ends of the building. From most available viewpoints one sees the nearer façade turning away from the viewer at both its extremities; at the far side it turns right away and is lost to sight (a far less 'endless' situation than a flat wall just stopping) but at the end of the façade nearer to the observer it turns away, stops visually at the edge of the air-gap and its implied continuation is then ruled off by the visible edge of the further façade, functioning here exactly like the roof in the vertical sense.

structure as slogan

The resulting plan-form is, of course, not unlike the lenticular plans of Le Corbusier's Algiers project, and has the same advantages in terms of internal circulation spaces, but the visual sophistication with which the form of the total envelope is presented leaves Le Corbusier nowhere—or, more fairly put, it reveals the preponderance of the diagrammatic over the optical in his work, whatever he may have said to the contrary. But Ponti and his team are not only being optical or superficial here, the whole form rests on a diagrammatic concept as radical as most of Le Corbusier's—indeed, the early publicity for the design was conducted almost entirely in terms of two diagrams, one for the plan, now visible in the *forma finita* of the building, the other for Nervi's brilliant structural concept—the two great doubly-bifurcated concrete columns that carry the main weight of the upper floors. Although the effect of this structure is implicit in the plan, it cannot be appreciated inside the building (being panelled over except in the entrance hall) but can be appreciated from outside, because the edges of the columns are brought flush with the curtain wall, and their taper is visually enhanced on the side toward the Piazza by an interruption of the glazing-bar pattern that leaves the column rising, apparently, through a



18, the billboard image: this model, though early, is still an accurate representation of the main lines of the plan and structure of the Pirelli tower. Comparison with illustrations of the completed building will show how effectively these 'slogans' are expressed in the completed work.

continuous glass panel.

The fact that these diagrammatic attributes are made manifest on the exterior, and were also extensively distributed to the press during the four years the Pirelli tower was building, should perhaps prepare us for a striking use of words in *Amate l'Architettura*, where Ponti captions these diagrams 'Grattacielo Pirelli a Milano: i suoi slogan.' The use of the word *slogans* (not being an Italian word it has no Italian plural) in this context shows that public relations cannot have been far from Ponti's mind at the time. These diagrams have not only acquired the status of symbolic substitutes for the building in print (much as the flat gilt V stands in for the Cadillac in its advertising) but they also identify its 'unique selling points' much in the way that a gloved hand delicately touching a button labelled *D* alerted the public to the gear-change of the Plymouth. The 'slogans' prepared the public for the Pirelli, and showed them how to look at it. When they looked at it, they saw that the slogans were true; plan and structure were just like that.

But this exteriorization of the inner economy of the building, both directly and via the slogans, has an added significance. The Pirelli tower is a giant billboard, and must be instantly legible from outside, because it has no public interiors to speak of. Apart from the entrance hall, there are no public spaces inside the tower: the superb three-storey glazed hall with its panoramic views over Milan, at the top of the building, and the science-fictional *teatro degli impianti* with its views of the services and machinery in the basement, are only seen during a *percorso turistico*, and the unguided visitor could not even find them. The only real public space, the auditorium, is not within the perimeter of the slab at all, but in the podium in front, and brings us at once to the town-planning aspects of Pirelli.

the billboard image

As a billboard Pirelli is magnificent—if only other advertising architecture were of the same quality! But the billboard effect depends on the simplicity of the total image—that the whole building should be an immediately comprehended slogan in itself. This simplicity has only been secured by the suppression or disguise of its ancillary accommodation. Literal suppression: the auditorium and a sizable work hall have been buried in the giant podium so that the tower can rise flush from its base. Literal disguise: the subsidiary offices that screen certain ground level untidinesses from the via Filzi have been restyled in an entirely different system of glazing and walling to distinguish them from the tower. The disappearance of the lift-motor house inside the glazed hall at the top of the tower is either disguise or suppression or both. But all this is perfectly defensible from the point of view of aesthetics as well as advertising: Ponti has got his closed form, Pirelli have got their billboard. But what has the Commune of Milan got?

When the master-plan for Milan was drawn up in 1953, the wedge of land bounded by the via G. B. Pirelli (the old Pirelli works stood there) and the via Galvani was designated for office-buildings as part of the so-called *Quartiere Direzionale*, a long-term project involving complete traffic reorganization of the Piazza Duca d'Aosta and the area around the Central Station (the prizewinning scheme was illustrated in AR *World*, August 1960). That master-plan was no masterpiece of urbanism, and it completely (perhaps excusably) failed to anticipate two portentous developments that have made it practically meaningless at this point. One is the enormous increase of the number of cars in Milan, the other is that the whole of the front part of the Galvani-Pirelli wedge, as far back as the via Filzi, has been acquired by a single giant developer, not two (or even three) smaller ones, and built up by that developer into a single complex building from which it will be much more difficult to remove parts than it would have been to acquire and demolish a smaller building if traffic developments made it necessary.

towards a traffic crisis

The view down from the top of Pirelli makes it only too clear what has happened. The tower stands at the back of the site—it must, to have clearance for the service roads round its base, and in front of it the podium sticks out into the corner of the Piazza like the toe of a boot. Only a small part of this toe is pavement that could be cut back for traffic improvements, the rest is all homogeneously part of Pirelli as a structure and integral with the programme of concentrating the company's office activities for which the enterprise was undertaken.

But if the bulk form of Pirelli obstructs traffic improvements, so will its parking arrangements. With a plot ratio of around 7:1 it has parking space—as the vertical view shows—only around the fringe of the toe and, in theory, on top of it, though this area seems to be only used by one or two favoured executive cars. When the Pirelli building and the other closely packed office blocks of the Quartiere Direzionale are all completed and fully occupied (which they are not, so far) by a yet more heavily motorized office population, all equally underprovided with parking, what is at present a moderately irksome rush hour traffic crush threatens to congeal into a major snarl-up. The Pirelli building, which could have contributed to the solution of this problem has done little more than aggravate it in advance, and must, *on that score*, be condemned as an urban building.

tall towers in the townscape

But only on that score. As a contribution to the urban scenery of a major European city it has no rivals except, perhaps, in Düsseldorf. Its size and form help to define the western side of the Piazza. Its presence transforms the *Quartiere Direzionale* from a poorly planned agglomeration of office blocks into something of an orderly hierarchy of small towers with which it groups in an unexpectedly satisfactory way. The Quartiere, which would otherwise have edged uncertainly into the vista from the station now arrives with a flourish, like a delegation headed by a really big man. As one circulates around the quarter, particularly along the via Pirelli, the rather dull arrangement of the smaller blocks in parallel, staggered ranks (which is visually quite ineffective as one looks towards the Piazza) is transformed every time one looks up and sees contrasting silhouettes against the sky—Lanerossi and Galbani, for instance—edged up against the soaring flank of Pirelli. Much of this is accidental, of course, but it exists, and most of it would not have happened had Pirelli not been a giant billboard overlooking the piazza; normal *British* town-planning methods would have put it somewhere else, in isolation, on a site that would have had no advertising value at all, and a major town-planning success at the visual level would have been lost.

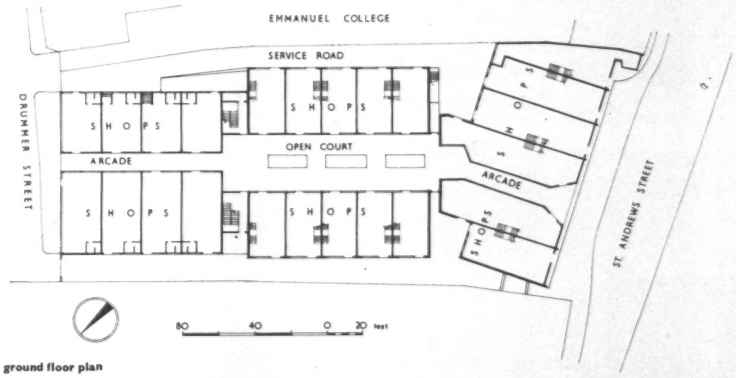
The Pirelli building might, then, be brought forward as a justification of free-enterprise town-planning. The case would be weak though, because Pirelli is doubly unique. Firstly, unique in its site—there is nothing in any major capital city of Europe which offers quite the same challenge and opportunities. Secondly, it is unique in having been created for a big-business situation that is unrepeatable outside Italy. Neither Mannesmann on the Rhein-front, nor Phönix-Rheinrohr on the Hofgarten, give Düsseldorf townscape quite the lift that Pirelli gives to Milan, and neither is a work of the same quality as architecture. The fact that one building, by accepting a particular social order, produces a masterpiece, does not mean that all buildings accepting that social order will be masterpieces, and planners are clearly right to circumscribe the amount of freedom they permit to free enterprise. But the fact that Pirelli is unique does not mean that there are no lessons that can be generalized from it, and one hopes that British planners, dedicated to a different concept of society, will not be too squeamish to read the lesson behind the slogans of Pirelli.

current architecture

SHOPS, CAMBRIDGE

ARCHITECTS: HUGHES AND BICKNELL

A group of shops forming two arcades and a central open pedestrian court, opening off St. Andrew's Street on land belonging to Christ's College, which it adjoins. Previously on the site were a miscellany of nineteenth-century buildings and Christ's Lane, an unattractive alley serving as the main pedestrian link between the centre of Cambridge and the bus station and the Fitzroy Street area. In developing the site as a shopping centre the right of way represented by Christ's Lane was diverted but preserved in the form of the way through the court



ground floor plan

1, *inside the central court, looking north-east.*

Shops, Cambridge

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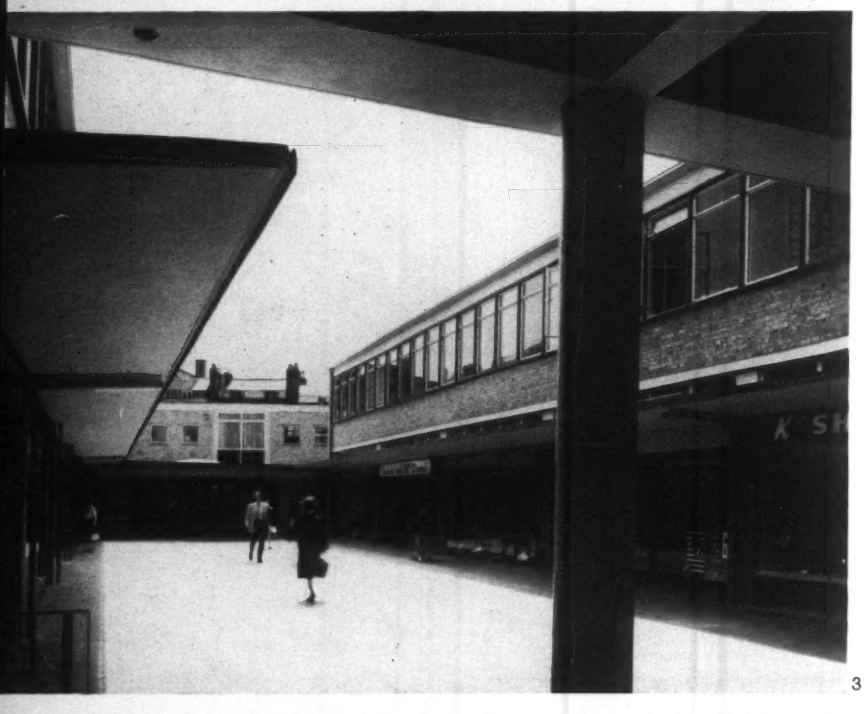

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2, view from Drummer Street. 3, looking south-west inside the central court.

and arcades, and two service roads formed behind the shops, one of which also serves Christ's College.

To meet planning requirements, the St. Andrew's Street frontage has been set back, widening the road, providing a bus bay and giving a new view both of and from the College. There is underground car-parking for about 20 cars and 100 bicycles. Shop fronts are strongly framed to give continuity to the façades. On the St. Andrew's Street frontage brown and grey bricks are used in a diaper pattern with a Clipsham stone fascia above the shops. The string course below the coping is white terrazzo and the coping itself black terrazzo. The columns flanking the arcade are grey granite; columns between shops, Clipsham stone with granite bases. Below the first-floor windows are dark green metal panels. The shops in the paved central court are separated by green terrazzo columns and the free-standing columns are grey terrazzo. On the rear, Drummer Street, frontage the metal panels in the curtain walling are dark blue.

Partner in charge: Peter Bicknell. Associate: John M. Wheeler.

INDUSTRIAL OFFICES, KING'S LYNN

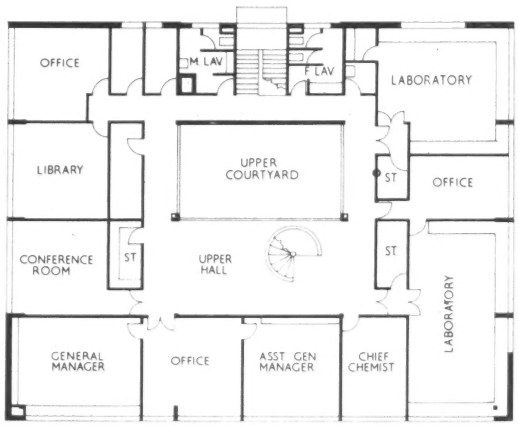
ARCHITECTS: FRY, DREW AND PARTNERS

A two-storey office block, also containing laboratories, sited on the grassy bank of the Great Ouse, to serve the adjoining manufacturing plant of Dow Agrochemicals. The building, which was completed in five months, is planned round a central courtyard. The ground floor contains a waiting-room, sales offices, directors' lunch-room, staff cafeteria and kitchen. A spiral staircase leads to the first floor containing research laboratories, offices, conference room and library.

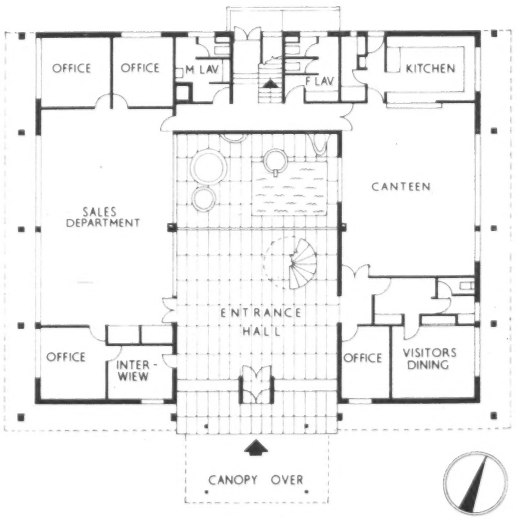
The structure is steel framed, with metal trough roof and 3 ft. deep floors within which services are run. The recessed lower storey is faced with dark Staffordshire brick tiles and the upper storey with white-painted vertical boarding, following the black and white tradition of coastal architecture. All windows are double glazed and horizontally pivoted because of the exposed position. The lower storey brick tiling is carried through the plate-glass front of the entrance hall, which extends to the central courtyard. It has a ceiling of beechwood strips. Ceilings elsewhere are acoustic tiles.

Assistant architect : Derek R. Preston.

4 (opposite page top), main entrance from the south.
5 (opposite page bottom), the entrance hall and spiral staircase to the first floor.



first floor plan

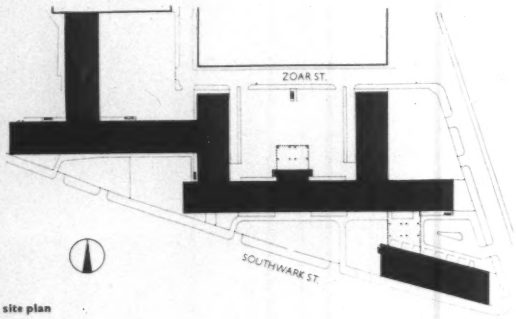


ground floor plan

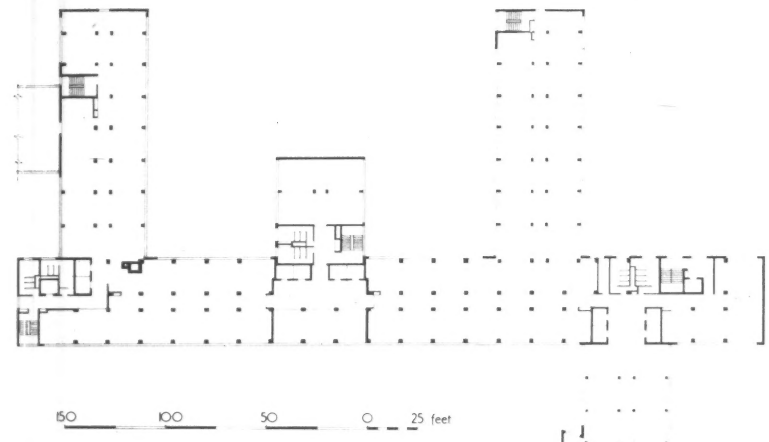
OFFICE BUILDING, SOUTHWARK

ARCHITECT: MORRIS DE METZ

Built for occupation by the Ministry of Transport and called St. Christopher House, this is the largest office building in Europe, with 18½ acres of floor-space and over 2,000 offices. It stands between Southwark Street and Zoar Street, and consists of three main blocks placed parallel with one another, that fronting on to Southwark



site plan



typical part upper floor plan

Street being of 14 storeys and the other two of 11 storeys. The three blocks are joined by short wings at right-angles, and farther along Southwark Street, at the south-east corner of the site, is a separate six-storey block with shops on the ground floor.

The structure which has piled foundations, has an in-situ reinforced concrete frame with flat slab floors. Each block is 44 ft. wide, with a 6 ft. central corridor and two sets of columns, 16 ft. apart, on either side. The outer columns are set back 2 ft. 6 in. from the face of the building. Cladding consists of precast concrete spandrel panels, with an exposed aggregate of green Criggion granite, set between thin precast mullions of reconstructed Portland stone. Flank walls are faced with precast panels with an exposed aggregate of dark red Harden stone. Dark green marble facing is used on the ground floor.

6, *the main entrance and* 14*-storey block from Southwark Street.*

EXHIBITIONS

SCULPTURE AND PAINTING

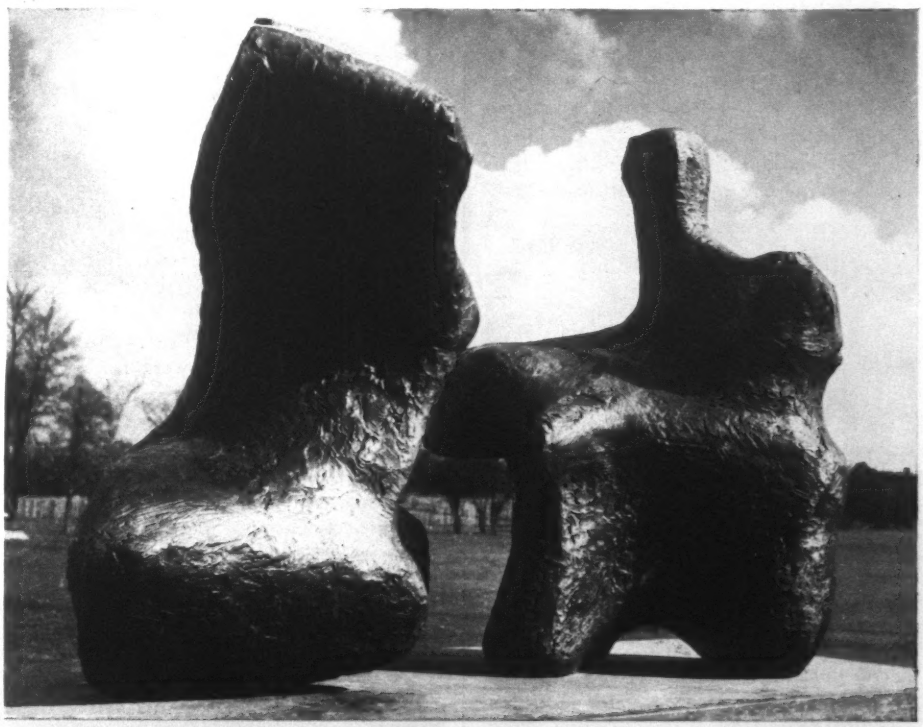
The two divided reclining figures in bronze—one of them rounded and boulder-like, 1, *cast in* 1959, *the other square-cut and cliff-like,* 2, *cast in* 1960—gave the exhibition of ten years of Henry Moore's sculpture at Whitechapel Art Gallery a tremendous *raison d'être.*

They have the look of something we have been hoping for, and many people see them as the richest, grandest, most monumental statements of a theme that has preoccupied Moore for thirty years. The theme they have in mind is of course that of a woman whose figure has been modified to emblemize a rocky landscape. It is one of Moore's great contributions to the conceptual art of our time and is among the most compelling of those unnatural images of the human species which paradoxically enough emphasize our total involvement in nature. And since we have learnt to cast doubt not only on our rationality but on our hopes of a hereafter, we have reluctantly accepted the modifications, rearrangements and distortions of the human figure with which the modern artist devises his personages. We recognize in these grotesques our own ferocity, avidity and absurdity.

But behind us there are several centuries of striving on the part of artists to capture the exact appearance of the phenomenal world, and it would be surprising if we were quite untroubled by the seeming insouciance with which the modern artist has negated that struggle. And try as we will, we find it difficult to dissociate the artist's distortions of the figure from the threat of the living mutant which lies at the heart of our fear of the atomic age. So it would not be an image of this nature, however grandly it might be conceived, that we could possibly be *hoping* for, and there is in fact evidence of a fundamental difference of approach to the double image of woman and landscape in Moore's recent reclining figures. The profound sense of reassurance that colours our response to them is caused by the fact that there is no interference with the human figure. The theme has been reversed, and for the first time the emphasis is upon the landscape element instead of the figure. These two bronzes are images of rocky landscape which bear a certain resemblance to some of the forms of woman. They have the look of being products of the earth itself, formed far back in geological time, and what there is of resemblance to a woman is like an accidental prediction of the human race.

There is no doubt about their monumentality. They are large in themselves but convey the impression of being infinitely larger. They are conceived as colossi, and in the mind's eye they are 200 ft. tall. They seem to me to be particularly suited to large interiors or strictly architectural settings, for they emulate landscape rather than emblemize it, and if they were put, like the cross at Glenkiln, into a landscape setting (other than for photographic purposes) they would be reduced to their actual size.

Although they are in bronze, one is conscious of the fact that they are the work of a great stone carver. Ironically perhaps, they are more eloquent of Moore's feeling for stone than the Unesco stone carving, and they celebrate the concept of 'truth to material' which produced the pre-war carvings in a superb *trompe l'oeil* of the textures of rock.



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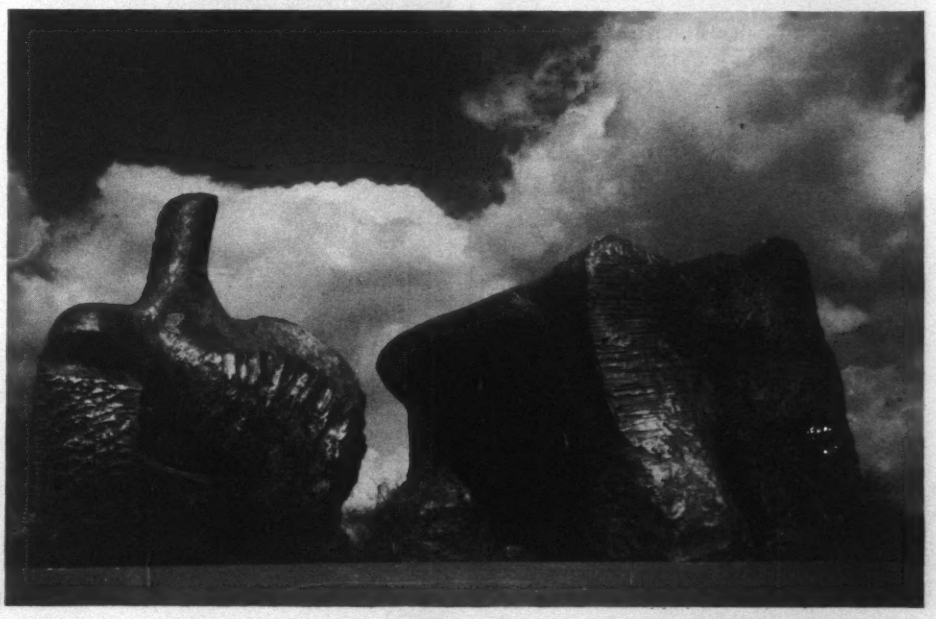

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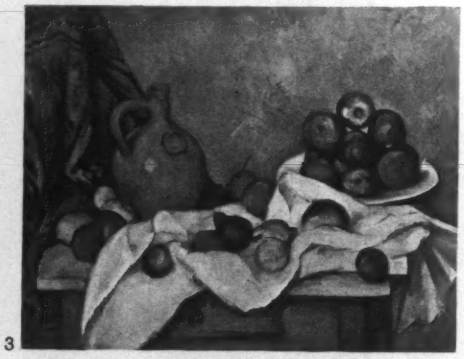
The John Hay Whitney collection recently exhibited at the Tate Gallery contains some marvellous pictures painted in the last great phase of perceptual art. It includes Renoir's 'Le Bal au Moulin de la Galette' from the Chocquet collection, smaller than the Louvre version, but more impressionist, and probably painted entirely in the open air; Lautrec's painting of Marcelle Lender dancing the bolero; one of the finest of Derain's fauvist paintings of the Thames; a lovely decorative panel by Vuillard in which the figures gradually rise to the surface of a sea of light as if attracted by one's gaze; a Rousseau jungle; a tender portrait of a mother and child by Rouault, of all people; a late Van Gogh landscape in which everything is on the move—clouds surge, olive trees writhe, the ground heaves and the hills climb one another as if trying to get away from something. It is a frantic picture in which, to quote Alfred H. Barr, 'the conflict between fact and feeling' is right out in the open. But the imposed



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calm of Cézanne's still life, 3, is scarcely less strange. Picasso once said: 'What forces our interest is Cézanne's anxiety—that's Cézanne's lesson.' In his still life, the anxiety is screwed up almost to too high a pitch.

When Van Gogh sent a parcel of pictures to his brother which included the landscape with olive trees, Theo's letter of acknowledgment included this remark: 'I find that the search for style detracts from the real feeling for things.' It was his way of referring to the fact that the shape of things was being distorted by excessive feeling and that everything was breaking loose under Van Gogh's convulsive stare. Looking at the Cézanne still life, one received the unexpected impression that he was desperately constraining a similar temptation to let the objects break loose. It is as if the table had become for him the brink of a precipice and that he was holding the apples to their perilous balancing act by an extreme effort of will.

After the hysteria of the Van Gogh and the tension of the Cézanne, Pissarro's portrait of his daughter Jeanne, 4, has a kind of relaxed and poetic simplicity. His

4

painterly gifts are at the service of a loving observation that seems to be quite free from possessiveness. No man has been more dedicated to his art than Pissarro, but he sought mastery without having the necessary thirst for power.

Seurat had this necessary thirst, but the calm of his 'L'Ile de la Grand-Jatte,' 5, is of a totally different kind from the calm of Cézanne's still life. If he had turbulent feelings they were not at war with his sense of order. Cézanne achieved a kind of ferocious calming of the waves; Seurat created a world totally imbued with serenity. His landscape is the most beautiful and mysterious picture in a splendid collection.

The collection also includes a fascinating group of American works, ranging from an ambitiously complex and bustling picture of Wapping, painted by Whistler two years after he settled in London, to good examples of the melancholy realism of Hopper and Wyeth. There are two admirable works by Thomas Eakins—a closely observed painting of oarsmen passing under a bridge, and a very likeable painting called 'Baby at Play,' 6, in which the influence of Courbet in no way detracts from a solid and touchingly methodical achievement. It is interesting to compare it with the Pissarro portrait. It was painted four years later, in 1876, but it is still involved in an obsolete science of picture-making and its carefully contrived naturalness assumes an almost primitive stiffness when compared with the easy, casual look of Pissarro's impressionism.

6

Theo Van Gogh's strictures on his brother's expressionism no longer strike one as insensitive. We are still deeply affected by images of anxiety since anxiety seems permanently to be with us, but we are beginning to realize that under the cover of our extremely dubious assumption

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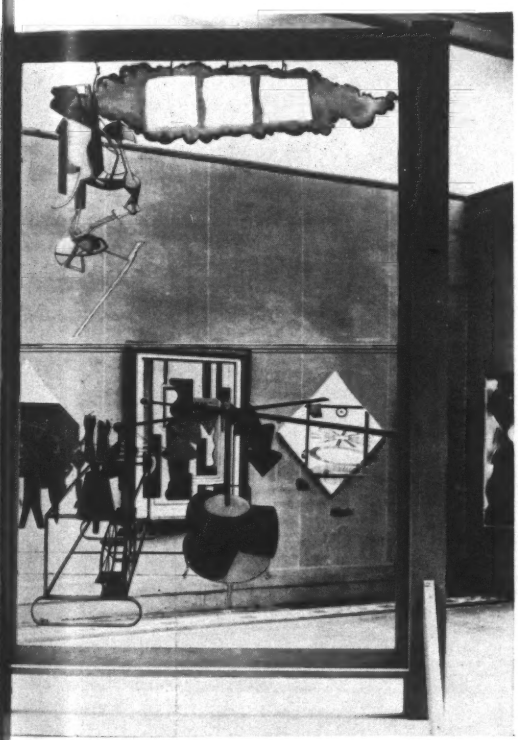
that great art does not incite, such images have romanticized our neuroses, stimulated us to new flights of anxiety and aggravated our plight. We seem to be ready now not for an objective art, which would only bore us (in this connexion, Professor Wind's belief that Klee would have been better occupied doing meticulous copies of scientific specimens, strikes as merely absurd) but at any rate for an art dedicated to a subjective devaluation of self-expression.

It is a sign of the times that a book has recently been published by Lund Humphries which bears the title of Marcel Duchamp's famous glass picture, 'The Bride Stripped Bare by her Bachelors Even.' The picture, started in 1913 and left unfinished in 1923, is now in the



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Philadelphia Museum, 7, and the book is a translation of the notes the artist made throughout the period he was working on it. No one would know it—without consulting the artist's notes or the articles that have been written about them—but the picture is an attempt to deal with a highly-charged human situation in a cool and ironical emulation of the scientific approach. To use André Breton's suitably prim description, the picture is about 'the passage of woman from the state of virginity to that of non-virginity taken as the theme of a fundamentally a-sentimental speculation, almost that of an extra-human being training himself to consider this sort of operation.'

Considered purely as a visual phenomenon it has already had considerable influence on the treatment of space in American painting; but Duchamp's cool and detached approach to his theme is in a sense more important than the work itself, and the notes in which he describes the function of the various pieces of apparatus that found their way into the composition are among the most remarkable documents of modern art.

It is evidence of the fascination Duchamp has for a younger generation of painters that the painter Richard Hamilton spent many months upon the task of finding typographical equivalents for the 'appearance' of his hand-written notes, and further evidence of the growing influence of his attitude that the 'targets' which so frequently appear in American and English 'hard-edge' abstraction are direct homage to his optical experiments with 'rotatives.' The *Times Literary Supplement* turned its review of the book into a mild typographical joke worthy of *Punch*, but the book is likely to be compulsive reading for alert art students.

Robert Melville

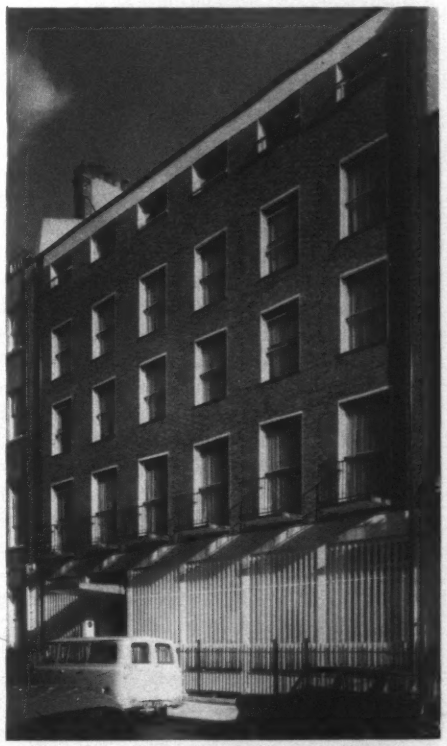
TOWNSCAPE

GAP FILLERS

It is altogether too apt that the General Dental Council building should be included here among gap-filling operations, *but in townscape terms the dental comparison has a working validity.* The front façade, 1, of the building designed by Sir Hugh Casson, Neville Conder and Partners (interiors on pages 188–192), occupies a space in a Georgian street that has already suffered attacks of architectural caries, followed by stoppings, extractions and replacements. The problem facing the architects was not unlike the aesthetic problems faced by dentists—the architectural equivalent of a gold tooth would have been too distracting, an attempt to fake up real enamel over an artificial body would have looked phony in these genuine surroundings. The final solution is a match for size and character, but not for detail.

What is well worth noting in this design is that it breaks one of the allegedly golden rules of infill, and maintains neither the storey-heights, the window shapes nor the bay-widths—in short, the proportions—of its Georgian neighbours in Wimpole Street. Only the heights to cornice and first-floor string-course are carried on from the adjoining buildings; even the window-balconies are of non-Georgian proportions. Many men of discrimination and taste would have turned down this scheme on the strength of an elevational drawing, which could never have revealed how comfortably it relates to the character of the surrounding structures.

In particular, no drawing could show how effective a substitute for rendered rustication is provided by the slats in front of the ground-floor windows—compare 2, the effect before these slats were inserted, with 1, and it will be seen at once how vital and unexpected is their contribution to maintaining the right balance of visual weight between the different parts of the building. The provision of some sort of equivalent for a rusticated ground floor is required by the planning authority, and an alternative solution can be seen in two other gap-fillers in the same area,



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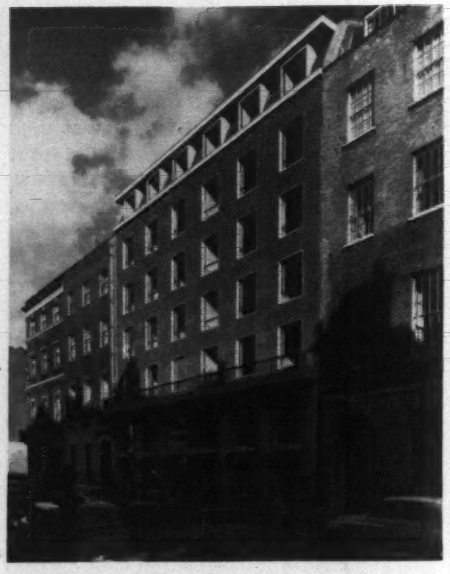

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both by Douglas Stephen and Partners, one of them farther along Wimpole Street, 3, the other in Harley Street, 4. Both employ similar basic solutions to that employed on the Dental Council building, except that they gain a storey of dormers above cornice-height, but then impose a most un-Georgian roof-slab above them, though without destroying the required character, and both attempt to employ the rusticated idiom as panelling in an apparently framed structure at ground floor/mezzanine level. The result, cleverly managed as it is, appears complex (which it is) and rather Mannerist, which may even be deliberate, and is certainly better than looking merely a compromise: while from the point of view of the kerbside observer it offers a surface treatment of very positive character, whereas much of the kerbside interest of the Casson-Conder solution comes from its half-veiled revelations of the interior.

But what happens when the ground floor is given, when it is not merely a question of maintaining the character of a streetscape, but of filling the gap over a scheduled monument? 5 shows the new upper façade added by Brian Westwood and Partners above the Savory and Moore shopfront in Bond Street (see frontispiece to this issue, page 156). Here, surrounded by architecture of the characterless type common to most of London's established shopping streets, it has seemed best—and justifiably so—to add five storeys that are frankly modern, without being any particular school of modern, and to suggest a bridging of the almost unbridge-able gap of style by means of a large recessed window carried behind ladder-frames that restrainedly echo the open-work below, yet maintain the rhythm of the fenestration above. A risky operation, no doubt, but effective in that this window-treatment echoes both the visual darkness and the visual penetrability of the scheduled shopfront.

C. Forehoe

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PLANTS

PLANTAIN LILIES

A splendid vegetable vigour is the characteristic of the plantain lilies, a group of Japanese perennial plants known as Hosta (syn. Funkia) belonging to the Lily Order, which are the subject of this fifth article in the series.*

* The four subjects already dealt with have been: the Heracleum or giant parsnip (August, 1960); the Acanthus (September); feathery plants (November); waterside plants (January, 1961)—all herbaceous perennials, chosen as being useful to architects for the external embellishment of buildings.

Their vigorous arching growth is coupled with a surface rippled rhythm in the ribbon-veined leaves and blue-green glaucous tones. The Victorians designated them as *noble* plants and often associated them with ferns. They flower in July with somewhat melancholy spires of white, greenish-white, mauve, pale or deep lily-like flowers. They prosper in semi-shade in deep well-drained garden soil, and should be left undisturbed when possible. If necessary they can be divided in spring when the shoots begin to appear. Cleave large clumps with a spade. At the first sharp frost the leaves are reduced to a papery transparency, very Japanese, like curled-up fluted tissue.

At Kew they are grown under a giant Black Walnut with martagon lilies, *Lilium umbellatum*, *L. canadense* and small azaleas, with a lot of peat dug into the soil, and a top dressing of leaf mould (or hop manure) applied in April to prevent drying out.

The most sculptural species are *Hosta Sieboldiana*, 1, which attains a height of about 2 ft. 6 in. (creamy lilac flowers), *H. ventricosa*, with large deep-spinach

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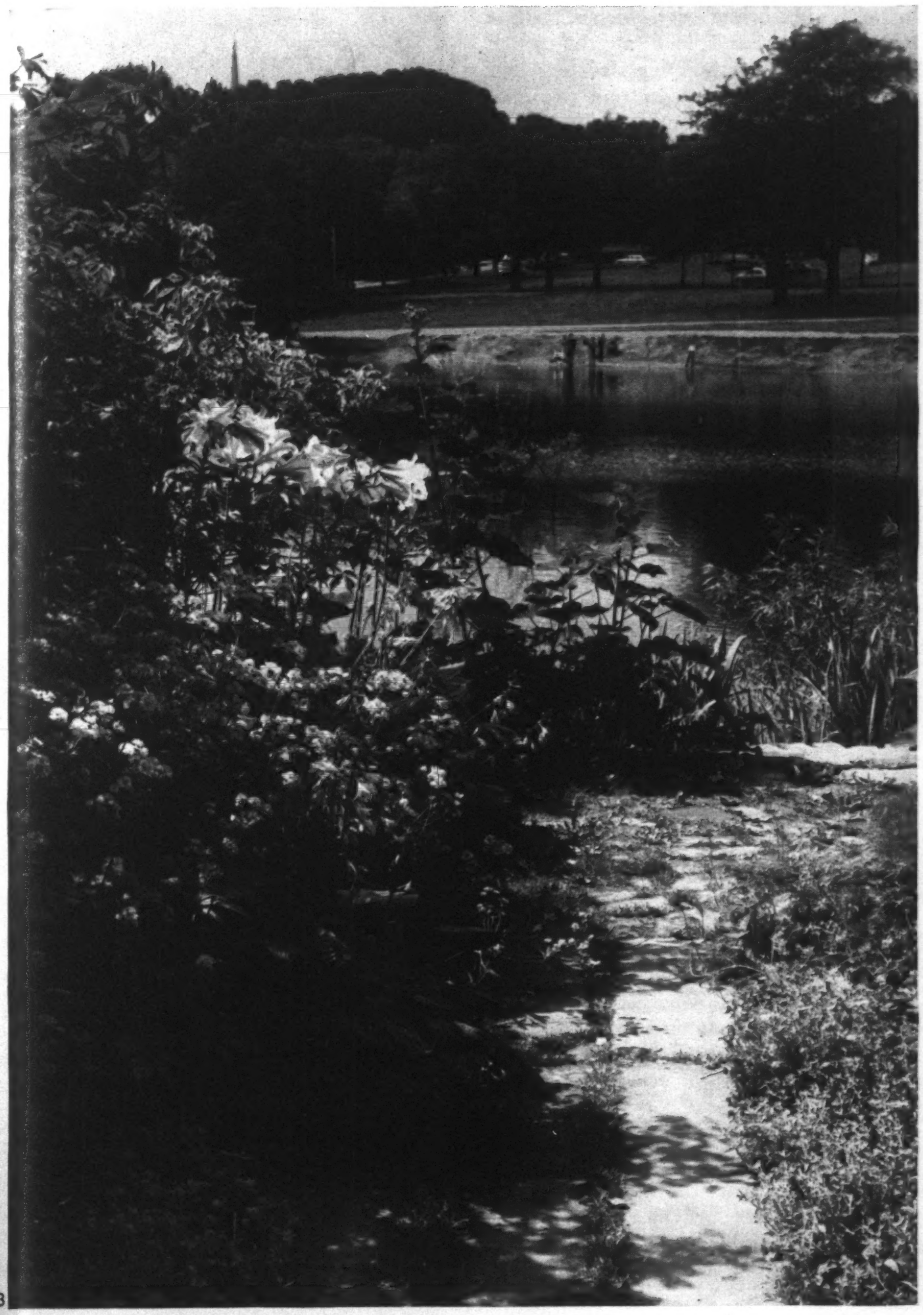

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green leaves, *H. plantaginea* (*syn. H. subcordata*) the colour of fresh lettuce, *H. Fortunei* and *H. glauca*, very stately in form and developing a strong bluish tinge in shade. *H. elata* has more conspicuous lilac tinted flowers at the expense of foliage. 2 is a close-up of *H. Sieboldiana*.

Leaf about hand-size, more delicate in form are *H. lancifolia var. gracilis*, *H. lancifolia var. albo-marginata*, variegated, *H. undulata* which has a silvery marking down the centre of the leaf and wavy edge, and *H. crispula* (*syn. H. Fortunei albo-marginata*) with silver leaf rim. The last is also shown on the right-hand edge of 1. There are also yellow variegated forms for those who want them.

Small are *H. rectifolia*, *H. tardifolia*, very pointed leaf shape and *H. minor var. alba*, variegated, suitable for edging. There is a tremendous confusion of names in plant catalogues, so it is best to select by eye.

Large hostas are magnificent planted in drifts of a single species, at two-foot centres, when they develop to the full their quality as vegetable sculpture. They are also fine as single specimens and combine remarkably with other plants. In Mr. Graeme Shankland's pondside garden, 3, *H. Sieboldiana* and *H. glauca* are grouped with star-flowered Astrantia (masterwort) and *Lilium candidum*, the wax white Madonna lily of cottage gardens (shown in detail in 4) and a ground mosaic of London Pride. Hollyhocks, biennial, self-seeding, architectural in spite of their lamentable associations, are grown behind. In a mass, they're magnificent.

Another striking planting I've seen recently consists of *Hosta Fortunei* with a well-developed dark and glossy *Acanthus spinossimus* (purple and white spire when it flowers), with *Lilium candidum* and in the foreground Heucherella 'Bridget Bloom' as tufted ground cover, plume poppies rearing up to five feet at the back.

There is something far from accidental in this conjunction of hostas with white lilies. Plants of one family, flourishing in the same conditions, they lend a luminosity to a foliage group, lustrous leafage and moonlight flowers, which no amount of stark colour could equal. In such a group in a not too shaded place one could introduce a white peony to flower in early June, and *Campanula persicifolia* planted in the foreground would produce its white bell flowers at the same time. For May flowering the bulbs of the white-starred asphodel, *Asphodelus albus*, which grows to two feet and *A. ramosus* (four feet). Both should be planted behind or amongst bushy plants like Astrantia which will conceal their foliage when it dies back after flowering.

The Sunningdale Nurseries, Windlesham, Surrey, have a good stock of Hostas.

Patience Gray

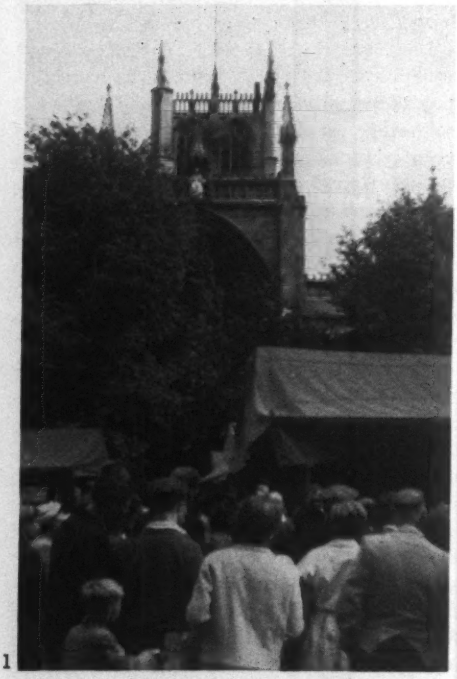
COUNTER-ATTACK

THE OLDER HULL

At a time when water was the great universal deterrent, the community destined to develop into the city of Hull found the ideal site for both protection and trade on the wedge of land formed by the River Humber and its tributary, the Hull. The island process

was completed by the construction of moats, which subsequently grew into docks; and although the Queen's Dock was filled in just before World War II to form public gardens, now being remodelled under Mr. Gibberd's careful guidance, the divisions remain and the Old Town has clung to its identity.

Within its confines can be found all the basic elements of a city and port; the parish church overlooking the market place, 1, the quaysides and warehouses, shipping companies and banks, a sprinkling of professional men, and the seat of local government. The pier, 2, provides the only section of public river frontage in the city, and hundreds of people congregate there,



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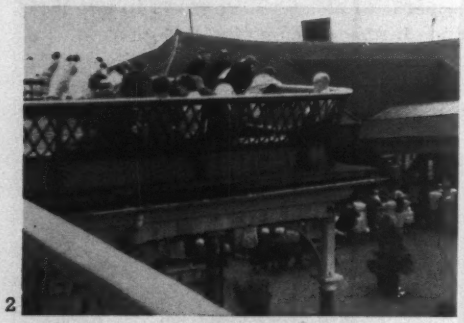

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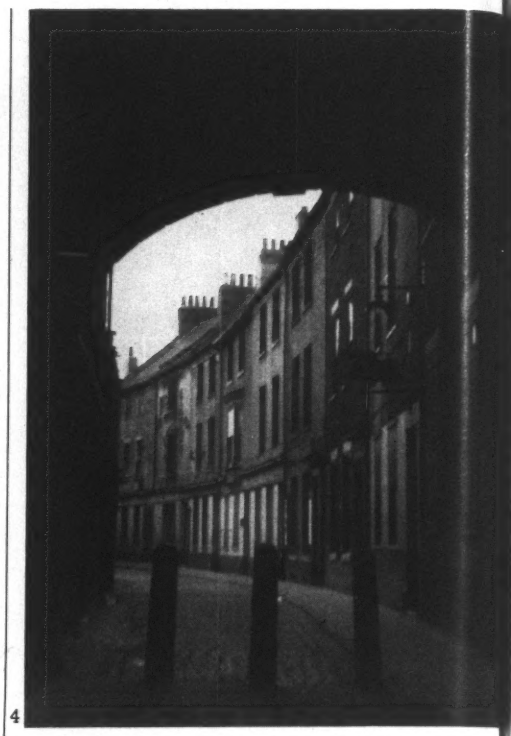
to eat lunchtime sandwiches, drink municipal tea, and look at the water. There are narrow shopping streets, which become involuntary pedestrian precincts as the public resists the chrome temptation of the new stores to tread the traditional paths.

Trade, commerce, administration and recreation mingle, as they have for centuries, and under the influence of the existing street pattern they frequently congeal. The architecture, apart from Holy Trinity Church, the inevitable Georgian houses in High Street, Trinity House, 3, the old brick-built grammar school and spasmodic warehouses, is unexceptional, oldish and crumbling. Yet in and around these decaying buildings is a varied and colourful community, a unique blend of white collars and polo necks, spiritual uplift and patent medicines, twentieth-century bustle and time to stand and stare; and somehow the background is often an appropriate expression of the Old Town's problem, 4. There is the interest, the charm the unexpected, and, simultaneously, the place is falling apart, 5.

The detached observer might expect that the area would be the subject of comprehensive redevelopment. However, the official master-plan presents only one or two coloured squares as the result of post-war years of meditation; the destiny of the greater part of the Old Town is described as 'Primarily business use—detailed proposals not yet made.' This, with respect, is hardly adequate. It will have to be decided whether the area is any longer of commercial value. The numerous bomb-damaged open spaces, still unwanted fifteen years afterwards, indicate a disinterest on the part of private enterprise which gives little cause for optimism, 6.

At the same time, the magnetic attraction of the river provides one obvious method of revitalizing the area. At the moment there is water to look at; there could conceivably be some to swim in, to paddle boats upon and to bask beside, free from tidal threats and shipping's by-products. Such exploitation of the river frontage would have obvious visual and social benefits and might even make a profit. The present amenities, by comparison, are only slightly better than nothing.

In an overall picture blurred by the lack of reliable economic data, and further distorted by sentimental attachment to the olde, the problems are difficult to define with precision. A well-established local rumour that the Town Docks, which form the western boundary of the area, are losing money, has recently been confirmed by the British Transport Commission, and they are likely to be closed



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within the next three years. This will inevitably lead to more redundancy, more decay, and more disintegration in the Old Town.

If, for reasons of time, ability or inclination, the planning authorities are unable to tackle the research which is so desperately needed, there is a ready-made case for an architectural competition; this, at the very worst, would stimulate professional and public interest, and might do a great deal more. It is unquestionable that in a city which is geographically flat and rather dreary, the Old Town is one of the few stimulating sites. It is much too good to rot.

Alan Plater

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6

SKILL

THERMAL COMFORT AND BUILDING STRUCTURE

1: Comfort and Climate

The concept of thermal resistance and the need to provide thermal insulation are generally well appreciated by architects. But the quantity of heat provided and its retention within the building represent only one aspect of indoor climate. Of equal importance is the much neglected concept of thermal capacity. In two articles Alexander Hardy considers what this should mean to architects. In this, his first, he defines comfort in physiological terms and also the climatic conditions which war against it. Next month he will consider the part played by building construction as the modifier of climate.

The basic physical requirement of any building for human habitation is that it should provide a private climate acceptable to most of its occupants for the duration of their occupancy. This function of a building is of major importance in hot and cold climates, where failure to achieve satisfactory thermal environments would render the building unusable. In temperate climates, however, the question of comfort is confined to the ability of the heating plant to maintain a certain temperature within the building in relation to a minimum external temperature; this being provided and maintained without undue expenditure.

The new situation

Before the application of industrial techniques to building construction, load bearing walls of heavy materials ensured adequate thermal insulation in relation to the cheap fuel available and also considerable thermal capacity. The result of this form of construction was that external temperature ranges were considerably modified within the interior and once the building was heated up in the autumn, it remained at a fairly constant temperature due to the large amount of heat stored in the structure, although the heat input would vary with the traditional hand fired, solid fuel heating system. Solar radiation on to the external walls would be absorbed, due to their high specific heat and density, and its transmission into the interior delayed in time, spread over in duration and reduced in intensity, so that over-heating in summer did not occur. In addition, window areas, due to load bearing wall construction, were small as compared with present day practice.

To-day the application of structural frames to buildings has transferred the load bearing structure to the interior, and as plate glass became available in ever increasing sizes along with other man-made impervious sheet materials, it became possible to enclose this frame in a very thin but waterproof envelope. The result has been to reduce considerably the ability of the enclosing building materials to modify the external climate and thence to cause us to rely more and more on costly mechanical equipment to manufacture an artificial internal climate which can be maintained under the whole range of external climatic conditions. Doubtless it is this approach which has led us to concentrate on thermal resistance to the exclusion of all other factors.

A point has now been reached where, due to the neglect of the whole range of thermal requirements of a building enclosure, buildings are in existence even in this temperate climate which require cooling systems to overcome over-heating by solar radiation. All around us we see large glazed areas screened by venetian blinds, curtains and even paper hangings in an attempt to overcome thermal discomfort, when all such devices only convert radiant heat into internally convected heat. The time has come to reconsider the whole problem of thermal comfort in relation to the thermal characteristics of buildings and the design of artificial climates.

Physiological data

In the consideration of thermal comfort it is essential to begin with a study of the human body in relation to thermal environment. Just as a complex piece of scientific equipment has to be maintained at a constant temperature if it is to function satisfactorily, so the human body has to be maintained at a constant core temperature of between 97.5 deg. F and 99.5 deg. F, regardless of the variation in the heat generated by chemical and physical processes within the body and the continuous variation of thermal environment which occurs in natural surroundings.

The way in which this core temperature is maintained can be divided into three distinct stages. First the physiological controls which operate on the flow of heat from the core of the body to the skin. These controls operate on the chemical processes by which heat is produced, the circulation of the blood, by which heat is transferred to the outer skin layers and the evaporative processes of respiration and the evaporation of skin surface moisture.

The second stage is the control of heat loss from the body by the application of thermal insulation in the form of clothing. The materials which provide this insulation control heat loss by radiation, convection and evaporation as well as giving protection from rain which would increase heat conduction, protection from wind chill and excessive solar radiation.

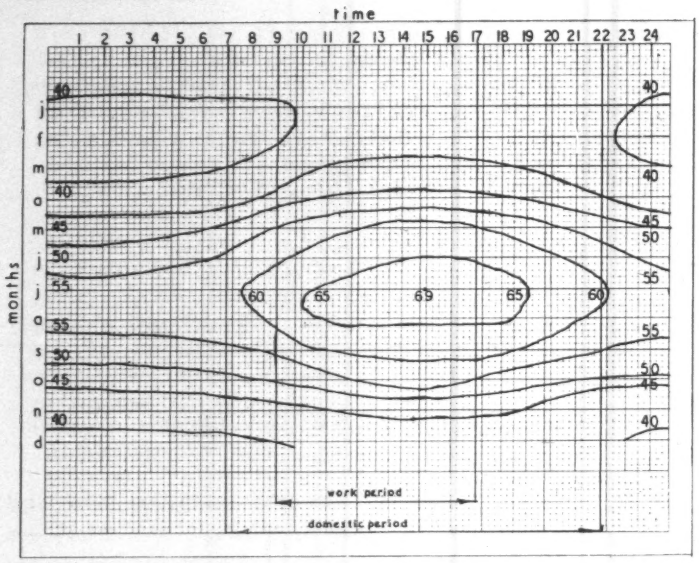
The third stage is the design of the physical enclosure that will modify the external climatic conditions, by restricting heat loss by convection, radiation and evaporation and also protection from wind, rain and excessive solar radiation. Such enclosure is essential in climates where clothing alone would provide insufficient protection or would be too restrictive to movement in the thickness required for adequate thermal insulation.

Thermal environment for human habitation can be divided into three temperature ranges for unclothed persons. Such ranges can be corrected in relation to the amount of thermal insulation provided by clothing, but as the amount of such insulation is very variable, physiological data is always related to the unclothed body. First, the temperature range above 86 deg. F. and up to the lethal temperature of 110 deg. F., this range is called the range of vasomotor and evaporative regulation, where the rate of heat loss is regulated by the flow of blood to the skin and superficial tissues and where the rate of evaporative loss increases directly with environmental temperature; the temperature range of sweating and thermal discomfort.

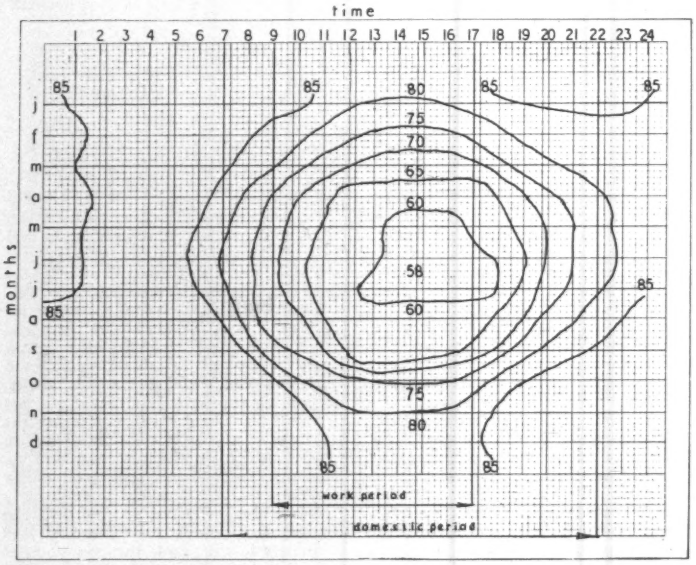
The second range lies between 82 deg. F. and 86 deg. F.; in this range, called the neutral or transitional zone, the control of heat loss is by the process of vasoconstriction and vasodilation, which produces a high degree of thermal comfort, achieved because heat is being lost by all the physical processes of heat transfer at a reasonable rate in relation to the amount generated.

The third range is that below 82 deg. F. in which the human body is no longer able to control the process of heat loss directly and unconsciously and the body loses heat as a mass of substance according to physical laws, in relation to the temperature difference between the surface of the body and its surroundings. Under such conditions the human being must either consciously increase his intake of food, so as to be able to increase his rate of heat production, increase his rate of physical activity so as to produce more heat by muscular energy, apply more thermal insulation in the form of clothing or move to a more temperate environment.

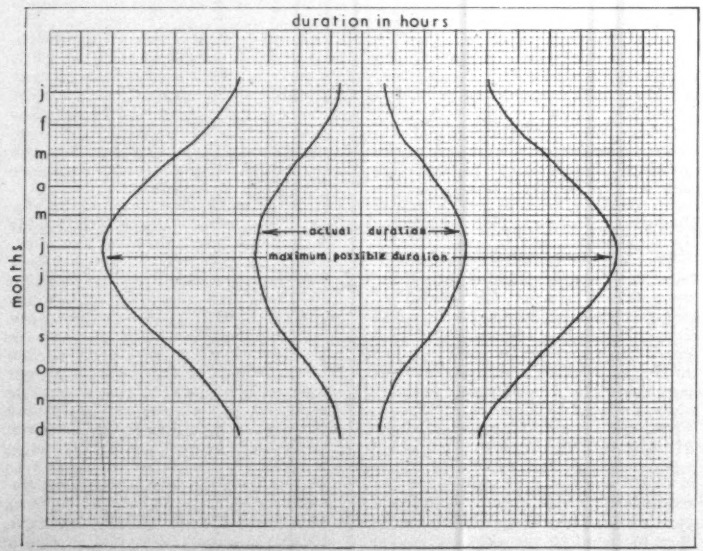
Although temperature ranges for unclothed persons have only so far been considered, relative humidity, which controls the amount of heat loss by evaporation plays a decisive part in thermal comfort conditions when temperatures are either very high or very low. For example in moisture free air and with a skin moisture content of between 25 per cent and 70 per cent the acceptable temperature range for unclothed persons was found to be between 92 deg. F. and 104 deg. F., but when the relative humidity was raised to 50 per cent the acceptable temperature range was reduced to between 89.5 deg. F. and 95 deg. F. It is usually assumed that in the middle ranges of Relative Humidity a fall



1, *monthly average air temperatures at Kew in degrees F.*



2, *monthly average relative humidity at Kew in %.*



3, *monthly average duration of bright sunshine at Kew.*

of 17 per cent in relative humidity can be compensated by a rise of 1 deg. F. in air temperature.

Effect of clothing

The standards of thermal insulation achieved by clothing differ considerably from country to country, when considered in general terms. Detailed calculations can be made of the thermal insulation value and external temperature of clothing, but as such insulation can be easily varied, this is of little practical use, as each person would have to be considered separately.

It is interesting to note that if the Clothing Insulation Value of the usual business suit and normal underwear is taken as Unity, then in European buildings, where thermal comfort standards are considered low by American standards, an office worker would wear 1.3 Units* in an air temperature of 65 deg. F.; an American would wear 0.7 Units in an air temperature of 75 deg. F. and a Russian would wear 2.0 Units in an air temperature of 54 deg. F.

What is the best climate?

Thermal comfort has, therefore, to be considered not only in relation to the heat output of the human body, as determined by food consumption, muscular activity and time of day, but also in relation to the amount of thermal insulation worn in the form of clothing, which determines the outer clothing temperature. It is possible to achieve thermal comfort with relatively low air temperatures where a high degree of thermal insulation is worn, but the tendency appears to be to reduce such insulation to a minimum towards the American standard of 0.7 Units and so give the occupants of the building the greatest amount of freedom within its enclosure.

It has already been stated that in the Neutral Range of Air Temperatures heat is lost by all three physical processes to the surroundings. Can we determine if there are any preferences in the way in which this heat is lost? Given freedom of movement, man tends to settle in climates where the greatest heat loss is by convection and evaporation and the least by radiation, although in a normal interior with air heating, 40-45 per cent is lost by radiation, 35-40 per cent by convection and 20-25 per cent by evaporation. Ideal climates appear to be those with considerable amounts of solar radiation, moderate air temperatures and where there is a noticeable air movement and moderate relative humidity. Climates with high air temperatures when combined with either very high or very low relative humidities are avoided, as are those with high air temperatures, but little solar radiation. It is interesting to note that climates which have very small diurnal ranges of temperature or very small seasonal temperature changes produce monotonous conditions that tend to be unsatisfactory for permanent occupation, unless variations of thermal environment can be experienced by the use of air conditioned buildings.

Satisfactory natural thermal environments therefore appear to be those in which the human body is losing little heat by radiation, due to a high degree of solar radiation being received directly onto the body and also indirectly from the warm earth, but where most heat is lost by convection to the atmosphere and where moisture evaporation is not either restricted or excessive. Such conditions are usually exemplified by the northern shores of the Mediterranean, where solar radiation is almost continuous, but where topographical conditions produce air movement and the large water mass modifies air temperatures. Is it possible to produce these conditions within buildings in this country, by careful consideration of the thermal characteristics of the enclosing materials and the means by which heat is introduced into the interiors?

The concept of equivalent temperature

Physiological investigations into thermal comfort have produced detailed specifications of the physical conditions that will achieve a high degree of thermal comfort, although technically some of these conditions are difficult to realize. The Scale of Equivalent Temperature devised by Dufton† takes into account Air Temperature, Air Velocity and the internal surface temperatures of the enclosure and provides a unit in which these three factors can be varied while maintaining a constant rate of heat loss from the human body. It has been established that for general purposes an Equivalent Temperature of between 65 and 70 deg. F. is the most comfortable, when the temperature of the surroundings is about 3 deg. F. higher than the air temperature, when the ventilation rate is not less than 25 ft. per minute, when the air temperature at head level is less than that at just above floor level or at least not higher than 5 deg. F. above that at floor level, when the ceiling level air temperature does not exceed that at floor level by more than 8 deg. F., when the relative humidity lies between 20 per cent and 80 per cent. In addition thermal comfort conditions cannot be achieved with air temperatures under 55 deg. F. or where floors are cold or floor draughts produce excessive heat loss through the feet or where excessive radiation falls onto the head.

To obtain an Equivalent Temperature of 70 deg. F. with an Air Temperature of 60 deg. F., the surroundings would have to be heated to an average surface temperature of 87 deg. F. or for an Equivalent Temperature of 65 deg. F., to 76 deg. F. The greatest comfort is achieved for the greatest number of occupants when the heat input is distributed over the largest area and high temperature, small area heat sources, which produce uni-directional radiation are avoided.

The value of changing conditions

There is another aspect of artificial thermal environment that requires further investigation. In natural surroundings man is subjected to a continuously changing set of conditions; diurnal temperature variations giving an indication of the passage of time and seasonal variations giving considerable changes in thermal environment for a single location. Artificial thermal environments in contrast, due to thermostatic control, are static in their conditions and produce monotonous states; it is suggested that such conditions may be psychologically

[continued on page 213

* A Unit of Clothing Insulation is the amount of thermal insulation that will transmit 75 per cent of the heat output of a resting sitting man with a skin surface temperature of 91.4 deg. F in an air temperature of 70 deg. F, relative humidity 50 per cent and an air velocity of 20 ft. per min. Equivalent 'U' Value 0.88 B.t.us.sq.ft. hr.deg.F.

† Dufton, A. F., *Equivalent Temperature and its Measurement.* Building Research Technical Paper No. 13, 1932.

continued from page 212]

unsatisfactory if occupied for the greater part of the 24 hours of the day.

Physiological investigation has also shown that the ability of man to adapt himself to a wide range of thermal conditions is considerably reduced if, for long periods he is subjected to static thermal conditions. Such conditions will only occur in buildings that are completely cut off from outside natural conditions and even then, if they are occupied for only up to one third of the day, the occupants would be subjected to variable conditions outside this period, in this country.

The outdoor climate

If these conditions are to be achieved indoors, then the next step is to consider how the outdoor climate can be efficiently modified so that the least load has to be taken by the mechanical installation.

The three diagrams indicate the local conditions at Kew and have been compiled from readings taken over a 30 year period. The first shows shade air temperatures, the second relative humidity, for each hour of the day based on monthly averages; and the third diagram the duration of bright sunshine, on a monthly average, in relation to total possible sunshine. From these diagrams it can be seen that the general picture is one of a very temperate climate; shade air temperatures are never excessive, and are well below thermal discomfort level. However for about eight months of the year additional clothing would have to be worn out of doors to avoid excessive heat loss. Relative humidities are rarely high enough to cause discomfort due to a reduction in evaporative losses, except for short durations that do not show in monthly average figures. The bright sunshine table, however is very interesting in that it shows that for over half the period of possible sunshine, the sky is obscured by cloud. Even so, the annual duration of bright sunshine totals about 1,460 hours, which gives a daily mean of four hours. It should be noted that monthly average figures taken over a long period do not reveal that occasionally there have been periods of thermal discomfort when air temperatures have never risen over freezing point for a whole month or when there have been long periods with maximum sunshine and air temperatures over 80 deg. F. The average diurnal temperature range for Kew is 8.5 deg. F. with a minimum of 3.7 deg. F. in December and a maximum of 13.7 deg. F. in May. Daily diurnal temperature variations of up to 30 deg. F. have been recorded.

THE INDUSTRY

Structural glass

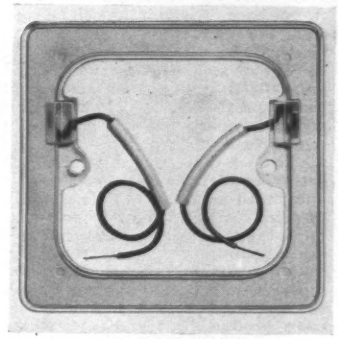
The illustration, 1, shows the entrance to a pedestrian subway in Lucerne. The glass screen consists of 'Profilit,' a structural glass developed by Moosbrunner Glasfabriks A.G. of Vienna. It is extruded in a trough section 10 in. wide by 1½ in. deep by ¼ in. thick and has the surface structure and light diffusing effect of cathedral glass. It can be used as a vertical cladding without glazing bars and is easily adapted to a curved or circular plan. For roof covering it needs purlin support at not closer than 5 ft. centres. 'Profilit' is now available in this country in plain, 'Wireline' (parallel wires) or 'Georgian' wired (square mesh).

Bomert, Teves and Blankley Limited, 10 Upper Thames Street, London, E.C.4.

Luminous locator

MK Electric Limited are going to spoil those dramatic situations for novelists when the hero finds himself groping desperately for the light switch. They have produced a device called a 'Luminous Locator' which pin-points the position of the light switch by emitting a bright green glow around it. The device consists of a transparent moulded frame, 2, which fits between the wall and the plate of any flush accessory having a plate of 3⅜ in. square and accommodated in a flush box having two fixing screws at 2⅜ in. centres. It is provided with two connecting leads, including resistors, which are connected across the line and neutral terminals. The manufacturers say that current consumption is negligible but its life is indefinite as it does not require light replenishment for effect. Price 5s. 8d.

MK Electric Limited, Shrubbery Road, London, N.9.

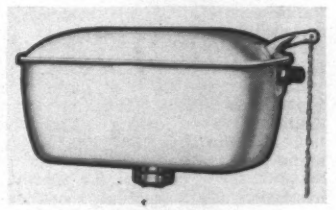


2, the MK 'Luminous Locator.'

Cisterns

Two new cisterns are on the market. Shires have added to their 'Lynx' range a fitting made in resin bonded rubber, 3, which is specially suitable for situations exposed to the weather. This new cistern is called the 'Lynx Automatic Cistern' and is available in one- and two-gallon sizes. Three- and four-gallon sizes of this design are being made, but at present only in 'Duramite,' a tough plastic. It is intended that eventually these sizes also will be made in resin bonded rubber. It is stated to be acid-, alkali- and salt water-resistant and impervious to extreme climatic conditions including dampness. It is fitted with a siphon mechanism conforming with BSS 1876.

3, the new Shires 'Lynx Automatic Cistern.'



4, Fordham's 'Volta' cistern.

Shires and Company (London) Limited, Greenbottom Works, Guiseley, Yorkshire.

The second new cistern is the 'Volta,' 4, made by Fordhams. It is a high level type moulded in rigid polythene with polythene fittings. Finish is white.

Fordhams Pressings Limited, Dudley Road, Wolverhampton, Staffordshire.

Electric fan heater

Amongst Morphy-Richards' latest range of heaters is the 'California' thermostatically controlled fan heater, 5. In fact this heater was introduced to the market last winter. It has a 2 Kw. element controlled by a 3 position switch (off, half heat [1 Kw.] and full heat). The fan also has a 3 position switch control (slow, medium, fast). Output of the unit is 9,000 cu.

1, Profilit structural glass screen.

ft. per hour. The unit, as will be seen from the photograph, is intended to be stood on the floor (it is 17 in. high, 15 in. wide and 9 in. deep, and weighs only 10½ lb.) and the makers claim that from this level it blows the hot air horizontally across the room to mingle first with the layers of colder air at floor level. Colour is always a problem with small pieces of domestic equipment such as this. Plain white or plain black somehow do not seem quite the thing, yet produced in any other colour you may well find that the whole scheme of decoration in the room is geared to the colour of the heater. In this case the makers have produced the unit in multi-colour, or 3 tone as they call it—cinnamon and white and the reflector red. In themselves the colours are quite pleasant. The fan heater is suited for either 200/220 or 230/250 volt AC. Retail price is £12 7s. 11d.
Morphy-Richards Ltd., 50 Conduit Street, London, W.1.

5, the Morphy-Richards fan heater.

Metal fixing code

A revised Code of Practice and Manual for Lightweight Metal Fixing Systems has been issued by the Metal Fixing Association for Building Insulation. The first edition of this Code was published in August, 1952, when the Association was formed and this latest edition brings together the information and experience accumulated by members since then. It also includes a BRS note on heat loss through light sheeted structures.

To those who are not quite sure what this is all about, the Association defines a metal fixing system as '. . . a framework of lightweight metal and accessories designed to support sheet material for thermal insulation, fire protection, acoustical correction or decoration finish, usually in the form of a lining or ceiling suspended from the building structure.' This means, of course, that it is not merely concerned with suspended ceilings but includes linings to industrial buildings, lightweight partitions and framework for the support of a plaster finish.

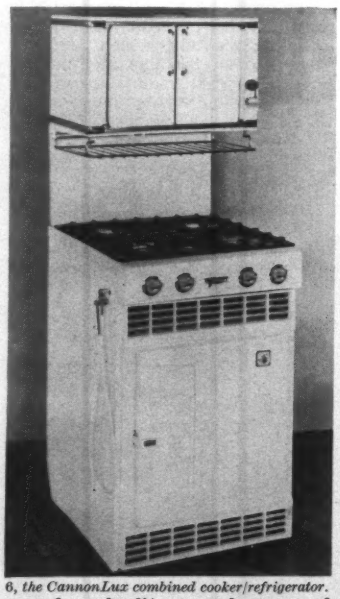
Much useful information is contained in this Code, including recommended tendering arrangements (members of the Association see themselves as specialist sub-contractors in the building industry) and architects are well advised to obtain a copy, which is available from the Association's secretary.
The Metal Fixing Association for Building Insulation, 32 Queen Anne Street, London, W.1.

Cladding

Robertson protected metal sheetings are well known to architects. They consist of steel sheet fully enclosed on each side with bitumen impregnated asbestos felt which is protected by a coating of mineral filled bitumen. Disquieting statements have appeared from time to time to the effect that the molten bitumen which falls from a protected metal sheet in industrial fires is one of the factors in spreading fire among combustible contents at ground level. The company maintain that the facts do not support this view. That there is considerable weight behind the criticism, however, may be deduced from the fact that production of this form of protected metal sheeting has now ceased. Its place has been taken by a new addition to the Colour Galbestos range, called 'Slate Black.' Colour Galbestos comprises a steel sheet with a zinc coating followed by an asbestos felt layer and a plastic finish. A report has been issued by the JFRO showing that the testing of grey sheets produced no surface flaming or dripping of the coating. These sheets were passed as Class 1. The manufacturers state that some colours in the range have a Class 1 Spread of Flame rating and others Class 2. For the benefit of those who do not have the information at their fingertips the JFRO definition of Class 1 is 'Those faces on which not more than 7.5 in. effective spread of flame occurs,' and of Class 2 'Those faces on which the effective spread of flame neither exceeds 12 in. during the first 1½ minutes nor exceeds a final value of 24 in.'
Robertson Thain Limited, Ellesmere Port, Wirral, Cheshire.

Combined cooker/refrigerator

If you are startled at the idea of having a cooker and a refrigerator in one unit, it just shows how old fashioned you are. The continual reduction in the standards of space in our houses was bound to result in something like this, and why not? This, no doubt, was the line taken by one of our leading manufacturers of cookers, Cannon (GA) Limited, and one of our leading manufacturers of refrigerators, Electrolux Limited, who got together and produced the CannonLux, 6, a combined cooker/refrigerator.



6, the CannonLux combined cooker/refrigerator.

Both cooker and refrigerator are gas operated and the oven and griller in the illustration are mounted above the hotplate. They can also be supplied separately, fixed to the wall alongside the unit or in any convenient position in the kitchen. Alternatively a high level grill can be provided which is mounted over the hotplate and folds back into the splashplate when not in use. As can be seen, the unit is visually the poor relation in an otherwise neatly designed unit. The hotplate has four burners which light automatically, the two at the back being suitable for simmering. The refrigerator unit is 1½ cu. ft. capacity or, in terms of shelf space, 3¼ sq. ft.

Colours available are white and cream and the price of the unit shown is 72 guineas.
Cannon (GA) Limited, Deepfields, Bilston, Staffordshire.
Electrolux Limited, 419 Oxford Street, London, W.1.

Electric cooker

The luxury market in cookers is to be tapped by an American and a British firm who have joined forces to produce the Thompson-Tappan electric cooking unit in this country, 7. The Tappan Company of Mansfield, Ohio, specializes in expensive cooking units in America and John Thompson Limited is a heavy engineering company which is moving into the field of domestic electrical equipment.

The cooker illustrated is the '436,' the smaller of two models now on the market. The '442,' the larger one, contains two ovens side by side. There is a built-in automatic rotisserie and broiler. Both models have the control panel at the top, the selling point being that they are out of the reach of children. Concealed lights are fitted above the hotplate and there are two socket outlets (one controlled by time clock) on the backplate. The hotplate which has four rings slides forward and the front half, which is hinged, contains a maple wood cutting board. The units can either be fixed to the wall or stood on a base (polished wood or metal base cabinets are available).

These units are not cheap, but you get your money's worth. They can be fairly truthfully described as having 'everything which opens and shuts.' The ovens are well insulated and the glass doors have removable silicone seals. Finishes are stainless steel and chromium plate. Despite the fact that they are aimed at the luxury market (usually meaning people who want something to show for their money), they are surprisingly neat and simple in appearance. The model '442' costs £248 and the '436' £185. A plate-warmer for 12 plates is available as an optional extra at £10 10s.
John Thompson Instrument Company Limited, Ettingshall, Wolverhampton, Staffordshire.

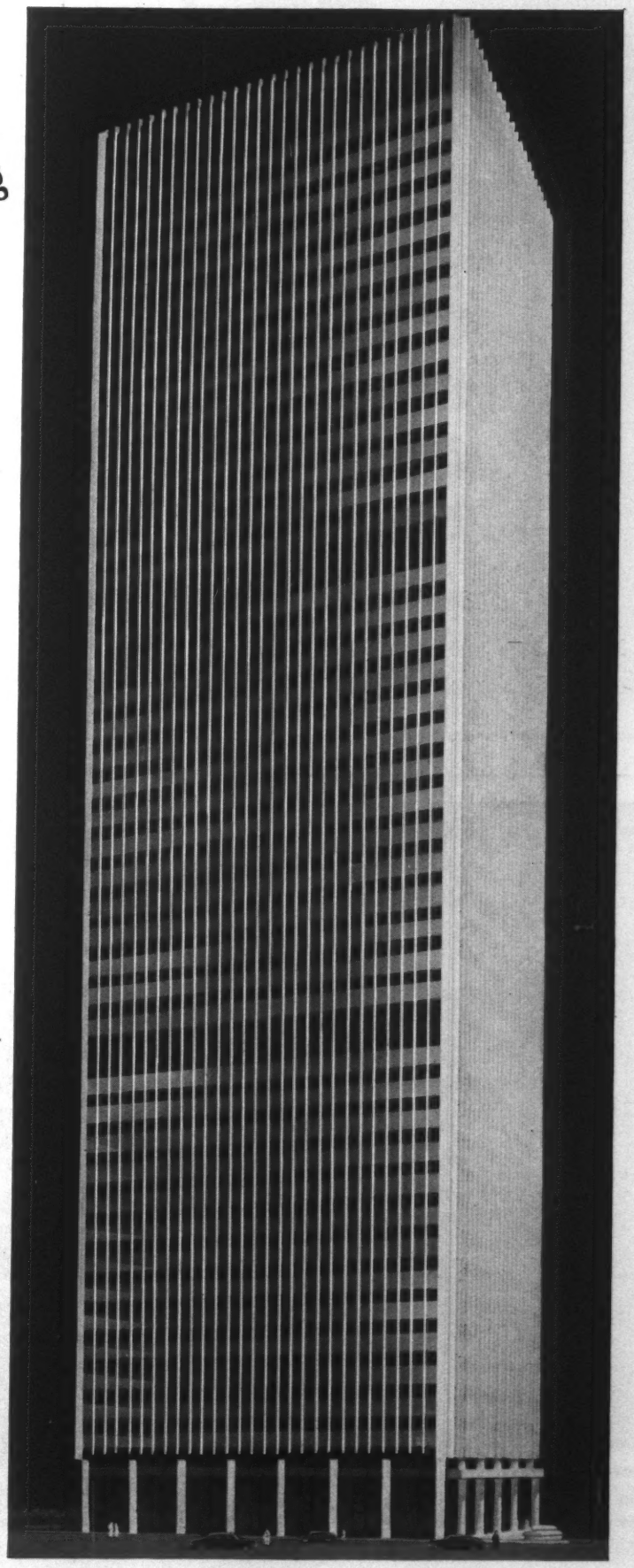
Emergency lighting equipment

Chloride Batteries Limited have produced two sets of emergency lighting equipment under the quaint title of 'Keepalite Junior Emergency Lighting.' The first, type SC/JKX, is for almost any type of building except a cinema or theatre. The second, type SC/JSR, is to protect the lighting in shadowless lamps in hospital operating theatres. Both types are completely self-contained in steel cabinets and consist of a

[continued on page 216

7, the Thompson-Tappan '436' electric cooker.

world's tallest slate-faced building



BROUGHTON MOOR has started shipping 125,000 sq. ft. of Spoutcrag (Langdale Pikes) Light Sea Green, naturally riven slate—one inch nominally thick—as cladding for the 600 ft. high Canadian Bank of Commerce Building, Montreal. The vertical tendency of its intriguing unique bar markings gives this famous slate its particular grace. Spoutcrag Slate is intensely durable, and weathers beautifully.

Spoutcrag Slate supplied only by

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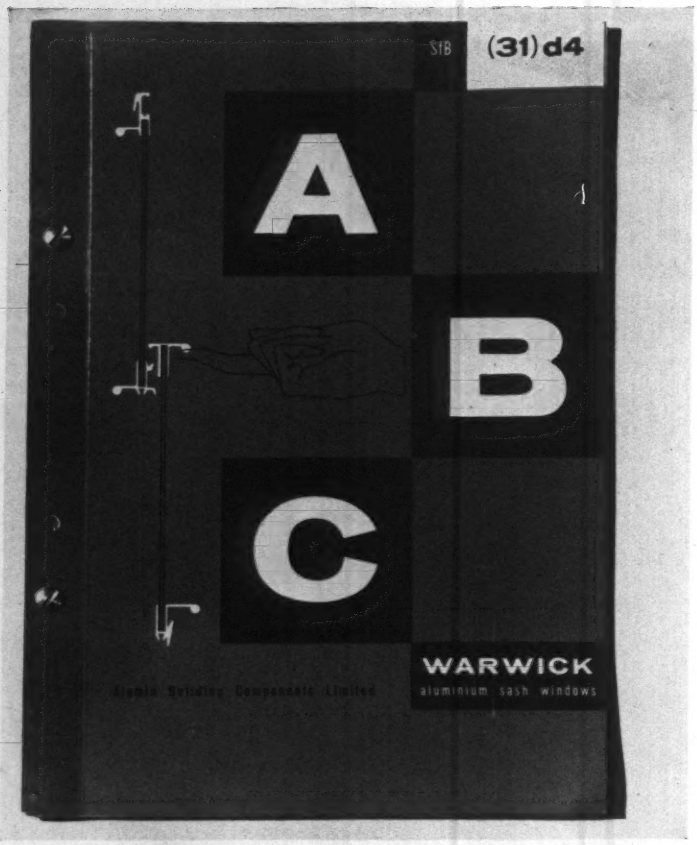
Please write for technical pamphlets: Flooring, Facings Copings, Cills, Riven Face Slabs— or our expert advisory service.

Owners—Dorchester Commerce Realty Ltd., Montreal
Architect—Peter Dickinson A.R.I.B.A. Toronto, Montreal, Ottawa and London
General Contractor—Perini Limited, Toronto
Structural Engineers—M. S. Yolles Associates, Toronto
Mechanical Engineers—G. Granek Associates, Toronto
Electrical Engineers—J. Chisvin Associates, Toronto
Fins and Panels—Toronto Cast Stone Company Ltd.



8, *catalogue issued by Alumin Building Components Ltd.*

continued from page 214]

battery and a control and charging cubicle. The SC/JKX has the automatic switch mounted on the control cubicle, the SC/JSR has an automatic switch comprising a separate relay and can be mounted either in or near the operating theatre itself. The emergency lights are switched on automatically during a mains supply interruption or failure of the main lamp in the operating theatre. The steel cabinets vary in size according to the type of battery to be accommodated, the smallest cabinet measures 1 ft. 10½ in. wide by 1 ft. 1½ in. deep by 4 ft. high and the largest 3 ft. 5 in. wide by 1 ft. 6½ in. deep by 4 ft. 8 in. high. This equipment does away with the need for a separate battery room.
Chloride Batteries Limited, Exide Works, Clifton Junction, Swinton, Manchester.

Window catalogues

The latest manufacturer to join the ranks of the enlightened in terms of trade literature is a firm who produce aluminium sash windows. Alumin Building Components Limited recently commissioned their consulting architects, R. Towning Hill and Partners, to design a new catalogue. The front cover of the result can be seen in 8. Needless to say it is to A4 size, has its SfB classification clearly marked in the top right-hand corner and can have sheets added to or removed from it by the simple process of undoing the two screws. If manufacturers only knew what a boon to the busy architect is the well designed uncluttered catalogue, such as this, we should be well on the way to a uniform standard for trade literature.
Alumin Building Components Limited, Winterstoke Road, Weston-super-Mare, Somerset.

A second manufacturer to toe the line in terms of A4 size is Williams and Williams with their new catalogue on aluminium windows. Though it does not use SfB classification and visually is not the sophisticated job of Alumin's new catalogue, it is well set out and contains general technical information on aluminium as well as technical details about the aluminium products produced by the company, which include double hung windows, reversible windows and sunbreakers.
Williams and Williams, Reliance Works, Chester.

EJMA window

EJMA has issued details of a new standard casement window called the type 'M.' For the first time the Association has based its range of sizes on the 4 in. module. The point of the new window is the use of friction hinges of an entirely new design which, when the sash is opened 90 deg. reveals a space of 5 in. between sash and frame, enabling cleaning of the outside face of the glass. The cross section of the frame members of the new casement window does not depart from the standard EJMA section, but the sash members are slightly larger to take account of the bigger sash sizes.
The English Joinery Manufacturers' Association, Sackville House, 40, Piccadilly, London, W.1.

Display spotlight

Early last autumn Rotaflex (Great Britain) Limited held an exhibition

[continued on page 218

Devon Wall Tiles were used for the exterior of this T.W.W. Studio at Bristol
Contractors: Messrs. Griggs & Son Ltd., Ashton Gate, Bristol
Architects: Treadgold and Elsey, F/F. R. I. B. A., A. A. Dipl.

DEVON WALL TILES

chosen for yet another new building

COLOURS: A wide range — from eggshell to bright finish, from mottled to a variety of screen-printed designs. Nearly all colours are available for exterior use.

STRENGTH: The use of special clays in manufacture gives the Devon Tile greater body strength than most other tiles.

EXTERIOR TILING: The ⅜" and ⅝" tiles are made with deep under-cut lock backs designed for perfect adhesion. Tests have proved the extremely high frost resistance of Devon Tiles.

MOISTURE EXPANSION: A low moisture expansion is a good guarantee of long and trouble-free life. The Devon Tile has an amazingly low moisture expansion after 20 hours in steam at a pressure of 50 lbs. per sq. in.

SIZING: Careful control of shrinkage during manufacture results in perfect sizing to a tolerance of less than 0·015".

DEVON WALL TILES

Made by Candy & Company Limited, the sole manufacturers of the Devon Fire

Write for further information and catalogue to:

Department R.5 Candy & Co. Ltd., Newton Abbot, Devon

12,000 DIFFERENT LOCKS

MORE SECURITY—MORE FLEXIBILITY WITH YALE MASTER KEYED SUITES

There's practically no limit to the number of combinations obtainable with Yale Master Keyed Suites. Yale master keying, which can be arranged to include cylinder, rim and mortice locks, latches, deadlocks, padlocks and cabinet locks, provides a new degree of security and control in office blocks, factories, schools, hospitals, flats, hotels and all other types of public buildings.

MASTER KEYED SUITES

Different locks each operated by its own key, but with a master to open all.

GRAND MASTER KEYED SUITES

Different locks divided into Sub-master Suites. Each Sub-master key operating all the locks in its suite, but not those in other suites. The Grand Master key will open all—up to 12,000 different locks!

LITERATURE

Explanatory leaflets and detailed specifications will gladly be sent on request.

Where there's a door

—there's a need for

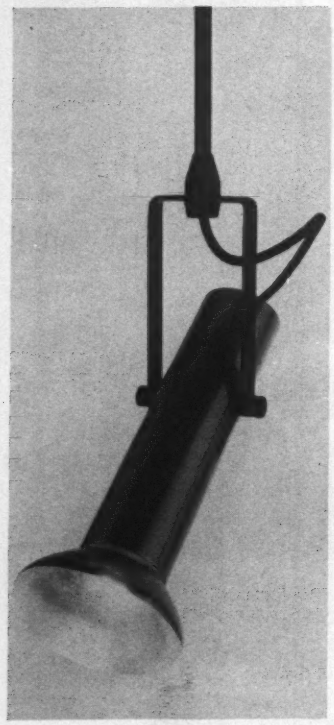
YALE

REGISTERED TRADE MARK

The YALE & TOWNE Manufacturing Company · Lock and Hardware Division · Dept. H3 · Willenhall · Staffs

continued from page 216]

of light fittings at the Design Centre. This comparatively young company has made its mark in the field of lighting largely on account of its enlightened attitude towards design. Not only does it have its own design staff under a qualified industrial designer, but it also makes a point of commissioning work outside. A large proportion of its range of fittings was designed by John and Sylvia Reid.



9, *the Rotaflex 'D4' display spotlight.*

Of the fittings displayed at the Design Centre exhibition the new D4 spotlight, 9, was outstanding. This fitting combines an elegant simplicity with functional flexibility. It can be adjusted to any position in the vertical plane, moved up and down the slot in the lamp holder casing and swivelled through 360 deg. in the horizontal plane. The lamp holder casing is in polished aluminium and the bracket and pendant rod in matt black anodized aluminium. Price of the standard model is £3.
Rotaflex (Great Britain) Limited, 4/10 *Nile Street, London, N.*1.

Lift brochure

A new brochure on lifts contains some useful planning information. On page 6 is a table of recommended dimensions for passenger lifts; on page 10 a similar table for goods lifts and on page 13 one for bed lifts. Some sectional drawings of paternosters are shown on page 17, and pages 18 and 19 deal with escalators. The most glaring omission is a table of contents at the beginning.
Marryat & Scott Ltd., Wellington Works, Hounslow, Middlesex.

CONTRACTORS etc

Houses at Twickenham. *Architect:* Eric Lyons. *General contractor:* Myton Ltd. *Sub-contractors: Roofing:* Permanite Ltd., Stramit Boards Ltd. *Kitchen fitments:* E. & H. Grace. *Joinery:* Builders Supply Co.

Flats at Blackheath. *Architect:* Eric Lyons. *General contractor:* Wates Limited. *Sub-contractors: Roofing:* Neuchatel Asphalt Co. *Kitchen fitments:* E. & H. Grace. *Joinery:* Rothervale Trading Co.

Houses on Campden Hill, Kensington. *Architects:* Dinerman, Davison & Hillman. *General contractor:* Elsworthy Ltd. *Sub-contractors: Thermoplastic tiles, vertical tile hanging:* The Marley Tile Co. *Teak parquet floors:* Vigers Bros Ltd. *Flush doors and kitchen cabinets:* Jayanbee Joinery Ltd. *Ironmongery:* Alfred Roberts Ltd. *Curtain tracks:* Silent Gliss Ltd. *Up and over garage doors:* Acrow Ltd. *Venetian blinds:* Horsley Smith & Co. *Balcony railings, flower boxes, circular and eliptic staircases:* Haywards Ltd. *Sanitary ware:* Stitsons Sanitary Fittings. *Heating:* Broad & Co.

Flats at Ipswich: *Architect:* Peter Barefoot. *General contractors:* Randall & Williams Ltd. *Sub-contractors: Plastic tile flooring:* The Marley Tile Co. *Terrazzo paving:* C. Pasini (Ipswich) Ltd. *Bituminous felt roofing:* Wm. Briggs & Sons Ltd. *Signwriting:* Mills & Rockleys (Production) Ltd. *Facing bricks (Uxbridge flints):* Wm. Brown (Ipswich) Ltd. *Steel rod reinforcement:* Indented Bar & Concrete Engineering Co. *Metal windows:* The Crittall Manufacturing Co. *Marble wall tiles:* Jaconello Ltd. *Sanitary fittings and ironmongery:* Smyth Bros. (Ipswich) Ltd. *Garage door gear:* P. C. Henderson Ltd. *Sewage disposal equipment:* Burn Bros. (London) Ltd. *Combination tank:* Rolyat Tank Co.

Houses at Dulwich. *Architects:* Austin Vernon & Partners. *General contractor:* Wates Ltd. *Sub-contractors: Structural concrete frame:* The Modular Concrete Co. *Metal windows:* Crittall Manufacturing Co. *Joinery:* James Longley & Co., H. & C. Janes Ltd., Davies Bros. (Timber & Joinery) Ltd. *Kitchen units:* F. Wrighton & Sons, E. H. Grace Ltd. *Doors:* Gliksten Doors Ltd. *Lifts:* Express Lift Co. *Lightweight roof screeds:* Isocrete Ltd. *Hardwood flooring:* Stevens & Adams Ltd. *Thermoplastic tiling:* The Marley Tile Co. *Sanitary ware:* Alfred Goslett & Co. *Textured ceilings:* Halford Jarvis & Co. *Steel balustrades:* E. C. Blackmore Ltd. *Natural stones:* South Western Stone Co. *Electric fires:* Ferranti Ltd. *Solid fuel fires:* Richard Baxendale Ltd. *Landscaping:* Knowles & Weller Ltd. *Slates, tiles and shingles:* Eastwoods (Sales) Ltd.

Houses at Wimbledon. *Architect:* John Macalpine. *Sub-contractors: Concrete roof tiles:* Wadcrete Ltd. *Parana pine flooring:* J. & A. Flooring. *Ironmongery:* James Gibbons Ltd. *Windows:* Rippers Ltd.

Flats at Cambridge. *Architects:* James & Bywaters. *General contractor:* Pepploe & Partners Ltd. *Sub-contractors: Short bored pile foundations:* Concrete Mouldings (Boreham) Ltd. *R.c. floors:* Broadmead Concrete Products Ltd. *Felt roofing:* Permanite Ltd. (Block 1), Cambridge Asphalt Co. (remaining blocks). *External tile hanging, floor tiling in kitchens and bathrooms:* Marley Tile Co. *Mosaics:* Cooks Plasterers Ltd. *Metal spiral staircases:* Torvac Ltd. *Internal doors and joinery:* Rothervale Trading Co. *Timber pivot windows:* Sawston Woodworkers Ltd. *Aluminium sliding sash windows and timber frames:* Alumin Building Components Ltd. *Stove enamelled corrugated aluminium panels between*

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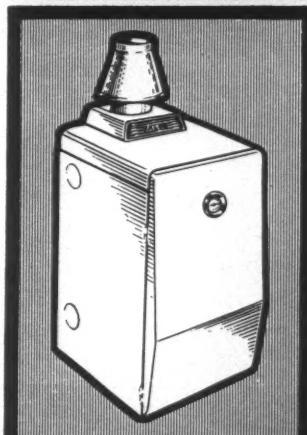

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Houses at Wimbledon and Forest Hill. *Architects:* Andrews, Emmerson & Sherlock. *General contractor:* W. Lilly & Co.

Flats at Wandsworth. *Architects:* Andrews, Emmerson and Sherlock. *General contractor:* A. J. Wait & Co.

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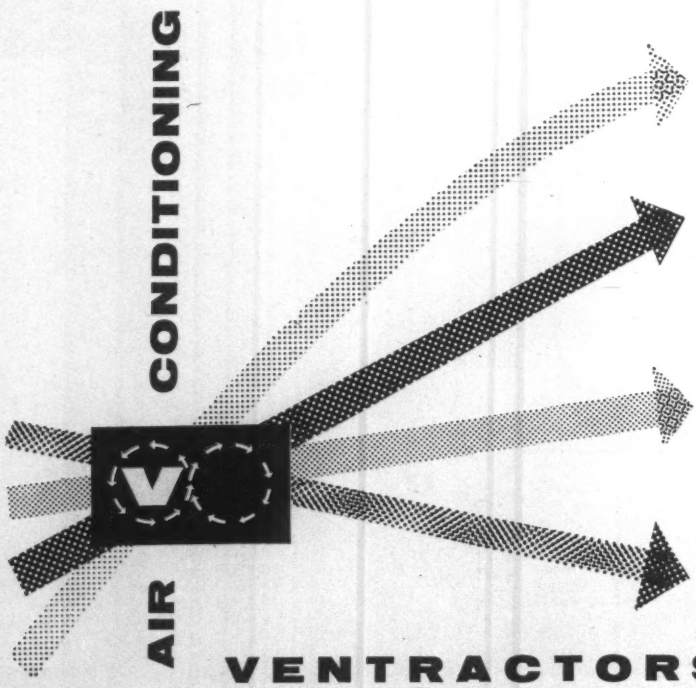

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